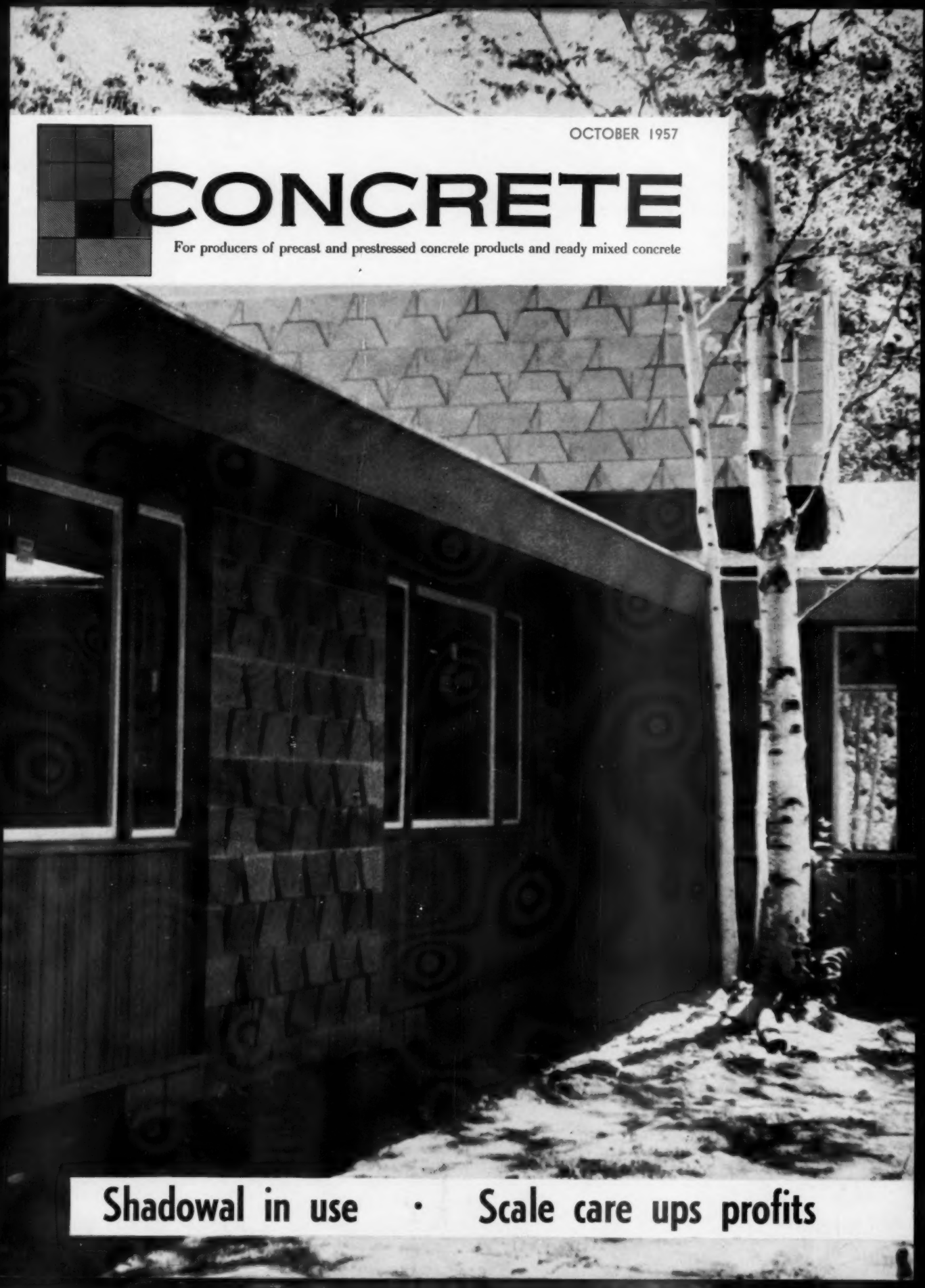
OCTOBER 1957

CONCRETE

For producers of precast and prestressed concrete products and ready mixed concrete



Shadowal in use · **Scale care ups profits**

Blockmaking Simplified...

with *Genuine*

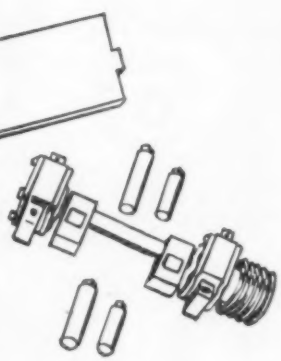
BESSER

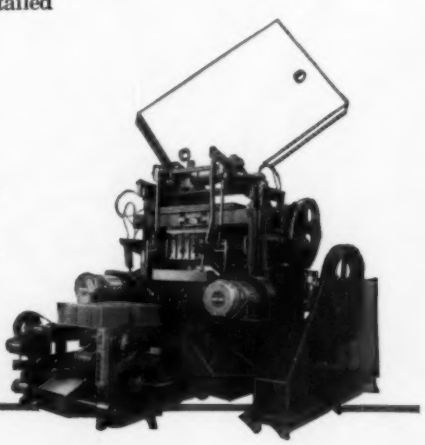
STRIPPER HEAD PLATE and REMOVABLE PLUNGERS

Here's an ingenious combination that spells PROFITS for the progressive blockmaker. With this genuine Besser Stripper Head Plate and Removable Plungers, special block can be made in any compartment of the mold by merely adding minor sets of parts. The change can be made quickly and easily, adding to the versatility of the Vibrapac machine and enabling it to make a great variety of units.

All plungers are reinforced to withstand the stresses placed upon them. And if one plunger is damaged, it does not necessitate the replacement of the entire stripper head. Cleaning is accomplished by removing one or all plungers.

All standard sizes are available for immediate shipment. For detailed information, contact the Besser Service Department.





BESSER Company

DEPT. 127, ALPENA, MICHIGAN, U. S. A.

First in Concrete Block Machines

BESSER PARTS STORES

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901 Sycamore
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DRake 3-5781

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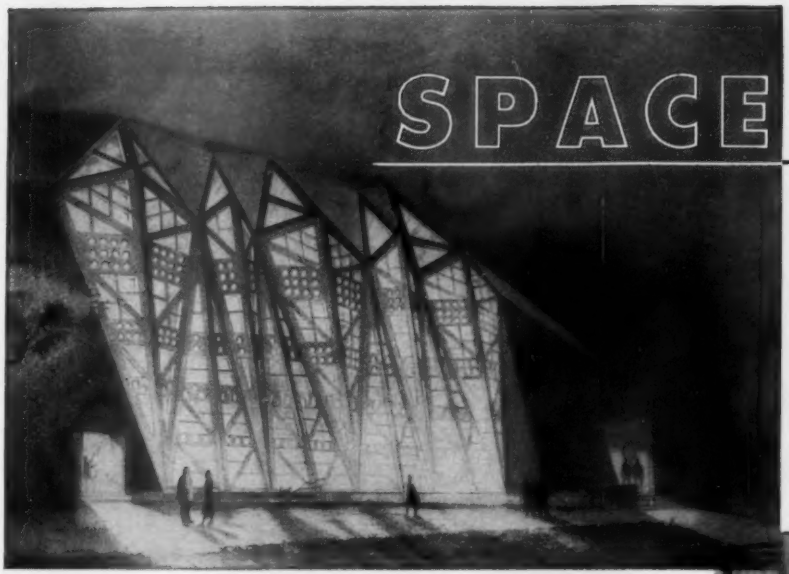
Phone:
MOhawk 3990 & 6019

ALPENA
Besser Factory Store
Alpena, Michigan
Phone: 291

LOS ANGELES
6100 Sepulveda Blvd.
Van Nuys, California
Phone:
STate 5-5457

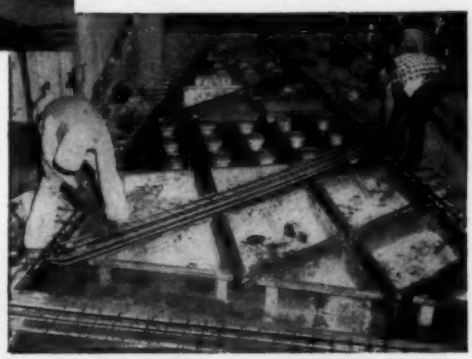
NEWARK
140 Delancy Street
Newark, New Jersey
Phone:
Mitchell 2-1434

BESSER Genuine PARTS



SPACE enclosed 'archi-structurally' makes this new church stand alone

Rendering shows giant abstract Biblical fish or whale form of church. Chancel, not shown, is at observer's left. Church is 234' long, 54' at its widest, and seats 670.



152 precast elements were used—80 triangles some perforated, others solid, and 72 solid quadrilateral panels—maximum sizes for panels 36 ft. x 10 ft.; for triangles 35 ft. on longest measure—maximum weights: for panels 10 tons; for triangles 5 tons.

Cathedral-Like Vastness Achieved by Wrapping Space in Pre-Cast Concrete

● Construction of the new First Presbyterian Church of Stamford, Conn. in which space is literally wrapped in precast concrete wall and roof elements that are self-supporting, without columns, beams or lintels can perhaps best be described as 'archi-structural' — the shell or frame being both structural and enclosing.

Reinforced concrete wall and roof elements, factory-fabricated to closest tolerances, were trucked to the job site. Panel bottoms were fastened to the footing, slanted panels being supported by false-work until roof panels were lowered into position, making the integrated wall and roof self-supporting. An eight-inch band of concrete connects the panels, resulting in a monolithic structure of great strength and rigidity.

The glass of inch thick amber, emerald and sapphire pieces was made in France from the templates of the triangular sections sent there for that purpose.

Dependable 'Incor'* high early strength, used throughout this job, makes possible assembly-line precision in casting . . . faster form re-use, maximum production with minimum form investment.

*Reg. U.S. Pat. Off.

Associated Architects:
HARRISON & ABRAMOVITZ
New York City
SHERWOOD, MILLS & SMITH
Stamford, Conn.

General Contractor:
THE DELUCA CONSTRUCTION COMPANY
Glenbrook, Conn.

Precast Sections:
PRECAST BUILDING SECTIONS, INC.
New Hyde Park, N. Y.

Consulting Engineer:
F. J. SAMUELY
London, England

Structural Engineers:
EDWARDS & HJORTH
New York City

LONE STAR CEMENTS COVER THE ENTIRE CONSTRUCTION FIELD

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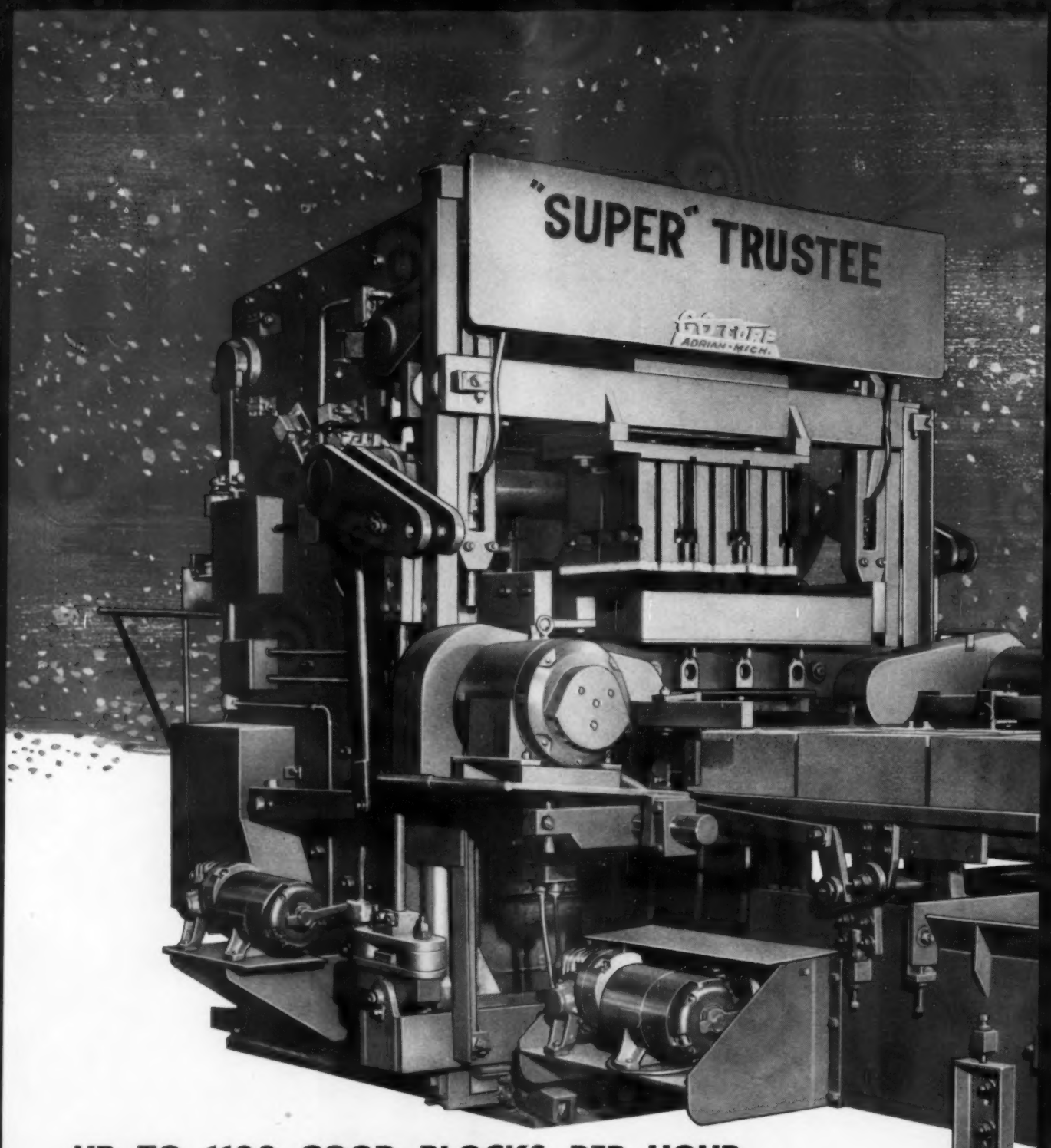
LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST CEMENT PRODUCERS: 21 MODERN MILLS, 47,900,000 BARRELS ANNUAL CAPACITY



UP TO 1100 GOOD BLOCKS PER HOUR

with "Super" TRUSTEE (shown above) 3 at a time, "Super" production model.

Other TRUSTEE models:

- **TRUSTEE "Special" — 3 at a time economy model.**
- **TRUSTEE 2-½ X — up to two 10 x 8 x 16" units per cycle and other combinations.**
- **TRUSTEE 2X — up to two 8 x 8 x 16" units per cycle and other combinations.**

The "Three-at-a-time" Trustee models will accommodate the molds and attachments that many of you now own.

GOCORP

TRUSTEE BLOCK MACHINES

FOUR MODELS—$14,000 to $40,000

THE TRUSTEE OF YOUR PROFITS

Here are a few of the features that mean extra value for you in every GOCORP TRUSTEE!

- **HIGHER PRODUCTION — Dollar for dollar, each TRUSTEE will consistently produce more high quality blocks per hour than any machine in its price class.**
- **QUALITY BLOCKS — Controls adjust quickly to handle troublesome mixes • Automatic, low voltage height control • A block receiver that babies your most fragile blocks — no jolts or jerks.**
- **HYDRAULIC DRIVE — (The modern way to transmit power) for swift, smooth, effortless motions.**
- **BUILT TO LAST — Rugged frame has heavy side plates — thoroughly braced with plate and structural members • Motors, pumps, shafts, single acting cylinders are all oversized for real staying power • Plug stop reversing vibrator motors — no brakes to fail.**
- **ACCESSIBLE — Working parts are where you can get at them • No pit required • Easy to adjust • Easy to clean • Easy to maintain • Change full height molds in about 20 minutes — to other heights in about 30.**
- **REALISTICALLY PRICED — No "price packing" to provide for ridiculous trade-in allowances, no "cushions" for unrelated items, or other such doubtful practices. *It's the cash difference that counts!***

Reserved for you **Your copy of the new TRUSTEE brochure. Send in your request now.**

OTHER GOCORP PRODUCTS

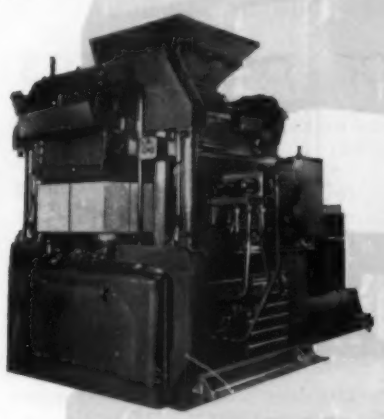
Junior" and "Junior Twin" (cored pallet), Senior" and "King" Block Machines. Mixers nd Skip Loaders.

GO CORP
ADRIAN-MICH.
405 Grace Street Adrian, Michigan

Columbia rugged concrete plant equipment is engineered to give you higher production, lower operating costs, greater profits

COLUMBIA BLOCK MACHINES GIVE YOU THE HIGHEST PRODUCTION
Per Dollar of Capital Invested
Per Square Foot of Plant Space Occupied

Columbia block machines are fully automatic, hydraulically activated, electronically controlled and extremely compact; 4 to 6 cycles or more per minute with automatic height and density control; standard plain pallets; by adding or changing parts in the basic molds more than 340 types of block are manufactured. Molds can be changed in 15 to 20 minutes when continuing to produce blocks of the same height.



Columbia's 12″-HIGH
"The One-machine Block Plant"—makes all three.

12 INCH . . . Roman brick, Norman tile, water meter boxes, silo staves, flue liners, partition block, hexagonal drain tile, specially designed face block and other special shapes.

8 INCH . . . the 12″-HIGH also makes all standard and special types of block in 8-inch heights.

4 INCH . . . the 12″-HIGH makes all normal blocks in the popular 4-inch height. The 12″-HIGH is available in two sizes.

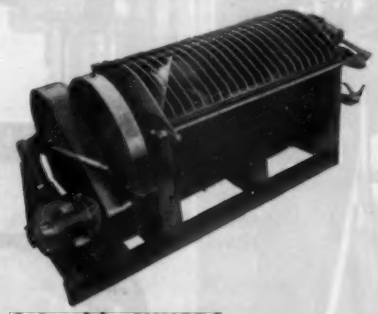
Columbia's MODEL 12—3 block
The Model 12 will make any combination of blocks that will fit into a mold opening 18″ x 24″, including all modular and specialty units. The machine is extremely compact . . . occupies only 96 square feet of floor space.

Columbia's MODEL 10
This 2½-block machine produces block in any modular widths up to 20 inches. It will produce combinations such as one 12-inch or one 10-inch and one 8-inch, or, two 8-inch and one 4-inch blocks at one time. This machine is especially popular in Canada and Northern United States where 10-inch blocks are in great demand.

Columbia's MODEL 8
. . . fully automatic block machine for high speed, dependable production of two standard 8″ x 8″ x 16″ blocks.

Columbia's SEMI-AUTOMATIC
Two-block machine . . . identical with Model 8, fully automatic but without feed box agitator and automatic controls . . . can be converted to automatic control at any time!

Columbia's BASIC MODEL
This is the Model 8, semi-automatic, two-block machine without the pallet feeder (pallets are fed manually). Accessories may be added at any time.



Columbia MIXERS
Columbia Mixers are manufactured in sizes and capacities to meet industry demand. The following five models are available for immediate shipment:

MODEL 12 (12½ cu. ft.)	MODEL 25 (27 cu. ft.)
MODEL 40 (45 cu. ft.)	MODEL 50* (54 cu. ft.)
MODEL 75* (81 cu. ft.)	

Handles 10,000 pounds of mix at one charge. Largest mixer in the industry

***Direct gear-head motor drive available on Models 50 and 75 at slight additional charge.**

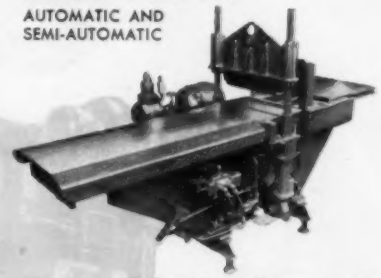
SKIP HOISTS
This equipment is self-contained; tower supports the skip hoist, material hopper, and winch which operates the skip bucket. Standard setup supplies aggregate for one machine, but can be designed to handle machines in multiples.

BATCH BINS
Columbia bins are available in two sizes: 22 cu. yd. and 55 cu. yd. They are sturdily constructed for long service.

CEMENT SILOS
. . . are available in capacities from 139 bbls. to 673 bbls.

PLASTICIZER
Gives fine, dense finish. Improved more salable color . . . a better block for your customers, an easier and more profitable block for you to manufacture.

BLOCK SPLITTERS
AUTOMATIC AND SEMI-AUTOMATIC



The new, Columbia, fully-automatic, block splitter is designed with split blades, both top and bottom, to insure clean splitting even with irregular concrete block. It will produce split block as fast as the operator can load the receiver. Handles either light-weight or regular concrete block up to 8 inches in height and 24 inches in length.

MOLDS
Columbia precision molds produce precision blocks! Columbia molds are of the finest steel, case-hardened for long life . . . completely production tested at the factory before shipment.

PLANT ACCESSORIES
RACKS, standard and custom built; **ROLL-AWAYS**, power and gravity; **PALLET CLEANER AND OILER; CUBING RETURN; MAGNETIC PALLET RETURN; PALLETS**, quarter and $\frac{5}{16}$ inch steel; **MOISTURE METERS; OFFBEARERS**, Columbia provides three types: magnetic, standard 2-pallet, and cubing.

PARTS
Columbia's parts and service department is geared to give you fast service . . . in some cases 24-hour service on your requirements!

Free! **Columbia's completely illustrated, colorful new CATALOG, loaded with detailed information will be sent upon request.**

Columbia
MACHINE

Home Office:
107 S. GRAND, VANCOUVER, WASH.
Phone OXford 4-1501
Factory Branch and Warehouse:
MATTOON, ILLINOIS
Parts Depot and Offices:
BURBANK, CALIFORNIA

OCTOBER 1957 CONCRETE

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FEATURES FOR THIS MONTH

Shadowal in Use . . . in Milwaukee 20

In the slightly more than a year's time that Best Block Company, Milwaukee, has had Shadowal attachments for one of their machines, they have produced these units for five structures. Here are pictures and a story of this company's first year with Shadowal.

Talking Around Obstacles 24

Mountains, hills, valleys, buildings, radio-frequency noise, and distance can impede radio communication between the truck driver and his dispatching office. Properly-located radio repeaters help to solve this problem so that mobile units can "talk back" to their plant.

Statement of Principles 25

Here is the "Statement of Principle" of the National Ready Mixed Concrete Association. The exact wording of these principles was approved by the NRMCA board of directors at their meeting on August 28.

Scale Care 26

Some of the do's and don't's about the upkeep of your scales. Scales, which you might say almost measure your profit (and possibly, loss) should be maintained. By Arthur Sanders, executive secretary, Scale Manufacturers Association, Incorporated.

Curing Concrete Units 32

This is the first part of an extensive article on the various methods of curing concrete masonry units. Succeeding portions of this article will follow in CONCRETE in the coming months. By William Grant

Consider the Future, Also—Editorial 48

The editor believes Shadowal, unfortunately, might lose a large part of its potential if care isn't taken now by producers to limit the type of structure using this new and attractive unit.

DOUGLAS LEE, EDITOR

DONALD T. PAPINEAU, Publisher

NBP

Advertising Representatives: Porter Wylie & Co., 114 East 13th St., New York 3, N. Y., Phone: Gramercy 5-3581; Crawford L. Elder, 2500 El Venado Drive, Puente, Calif., Phone: Oxford 44-116; Clarence L. Morton, 294 Washington St., Boston 8, Mass., Phone: Liberty 2-8538. Subscription Price: $6.00 a year anywhere in the world, postpaid. Single copies, 50 cents each. Copyright 1957 by Concrete Publishing Corp. Accepted as controlled circulation publication at Mendota, Ill.

VAC

Write for a better way to bag new business

If you're gunning for more business from new construction, Dodge Reports can help improve your aim. They point out your *live* prospects . . . put an end to the hit-or-miss method of finding business. If you would like to see how Dodge Reports can build your business . . . help your profits mount, just read this coupon, and mail it today!

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I want to know whom to contact and when to submit bids.

I'd like to see some Dodge Reports, and I'd like a copy of your booklet that tells how to use this accurate, daily, up-to-the-minute construction news service.

I understand that I can pick just the area in the 37 Eastern States and the type of construction activity that interests me. Also, that I won't have to wade through mounds of data to find the information I need.

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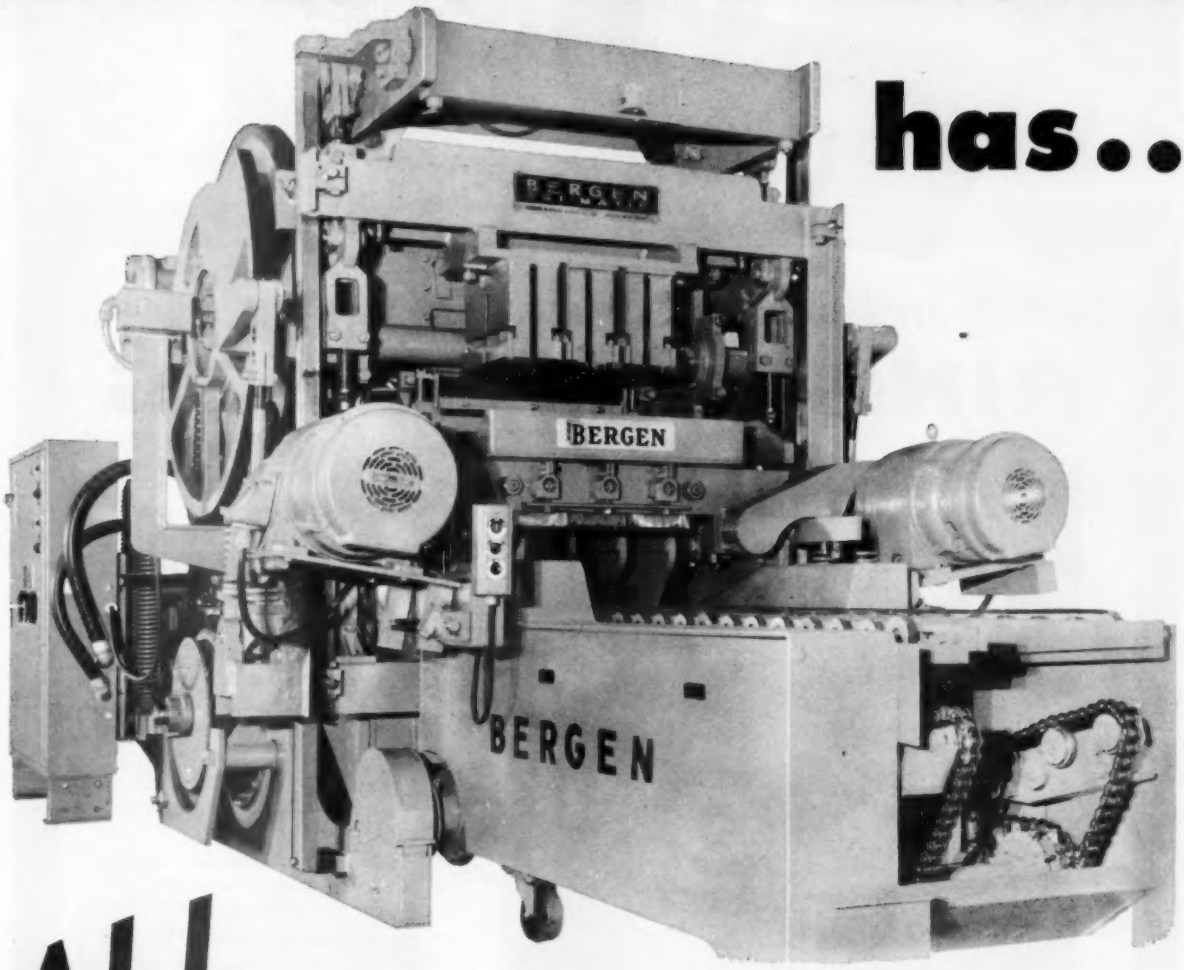
CITY _____ ZONE _____ STATE _____

Dodge Reports
For Timed Selling to the Construction Industry

BERGEN TRI-MATIC has..



ALL these features!

- **HIGH PRODUCTION**
  6 mold cycles per minute
  10,000-8" equivalent units per day
  Unsurpassed, consistent performance

- **PROVEN DEPENDABILITY**
  Heavy Duty Construction Throughout
  Fool Proof Cam-and-Roller Operation
  Long, Trouble-Free, Economical Service

- **ZEROMATIC HEIGHT & DENSITY CONTROL**
  Uniform density, texture and size through positive and automatic control of aggregate feed and vibration time

- **FRONT PALLET FEEDER**
  Exclusive Harmonic Drive attains Shock-Free, high speed operation

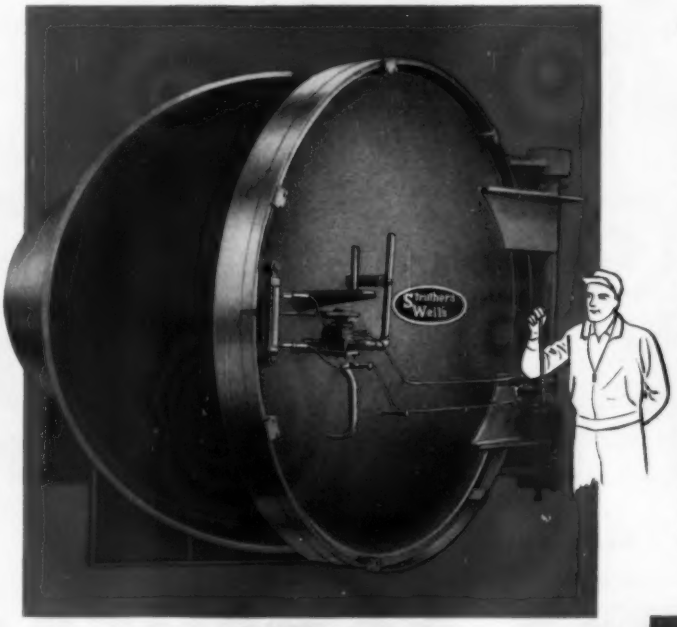
- **HIGH-SPEED HOIST**
  Special design features for high production operation. Smooth-operating . . . minimizes operator fatigue

These features are incorporated in the BERGEN TRI-MATIC, but can be applied to your existing equipment. Write to Bergen and discuss your block plant plans with Bergen engineers.

BERGEN MACHINE & TOOL CO., INC., NUTLEY, N. J.

Insist on Struthers Wells

RING-LOK DOORS



Quick opening...
Positive closure!

CONSIDER THESE FEATURES

- Longest gasket life in the concrete block industry
- Seals against vacuum or any pressure up to working pressure
- Locking ring groove is exposed when door is open, allowing for quick and easy cleaning
- Simple, rugged ASME Code construction for trouble-free operation
- Door is furnished with safety interlock device and positive safety system is available
- Low initial cost plus savings in gaskets, maintenance and steam losses means more profit per block

ideal companion to your new autoclave—
the Titusville packaged water tube boiler.

Struthers Wells

Struthers Wells Products

FORGE DIVISION
Crankshafts . . . Pressure Vessels . . . Hydraulic Cylinders . . . Shafting . . . Straightening and Back-up Rolls

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MACHINERY for Sheet and Structural Metal Forming . . . Tangent Benders . . . Folding Machines . . . Roller Table and Tumble Die Bending Machines . . . Press Brakes . . . Punching and Notching Machines . . . Forming Dies

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BOILERS for Power and Heat . . . High and Low Pressure . . . Water Tube . . . Fire Tube . . . Package Units

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Offices in Principal Cities — **Plants at Titusville, Pa. and Warren, Pa.**

NEW MOTOROLA T-POWER 2-WAY RADIO

Transistorized Power Supply for both receiver and 25-watt transmitter

Long Life Transistors Replace the Vibrator . . . Reduce Maintenance and "Down-Time"

Already famous for the lowest maintenance and operating costs in the 2-way mobile radio field, Motorola mobile radio is an even better investment now—with the T-POWER unit. The vibrator is gone! . . . replaced by rugged long-life transistors. Gone, too, is the problem of frequent vibrator replacement. Here is a mobile radio with an all-electronic power supply.

New Mounting Flexibility with Plug-In Control Head . . . Same Basic Unit can be Used for Front or Trunk Mounting

With the T-POWER radio, you are no longer restricted to one type of mounting. Install the complete radio, with drawer unit and plug-in control head, for under-dash mounting. For rear mounting the same basic drawer unit can be installed in the trunk and connected by cable to a dash-mounted control head. And—the same basic drawer unit can be interchanged with the equivalent Motorola Twin-V trunk mount radio models operated from a 12-volt negative ground source.

T-POWER radio is another example of Motorola's continuing leadership in the practical application of transistors in mobile radio. Other tested and proved transistorized products include the Dynamic Microphone and Power Voice Speaker.

Get all the facts.—Write now for literature with complete information.

MOTOROLA Communications & Electronics, Inc. • 4501 Augusta Blvd., Chicago 51, Illinois • A Subsidiary of Motorola Inc.

The Advanced KEN TWIN

Faster production

Higher quality blocks

Lower operating cost

Lower maintenance cost

Lower initial cost

Longer life construction

NOW FURTHER REFINED

With the value of its basic principle and uncommonly simple operation conclusively demonstrated — these improvements now assure longer life, reduced operational costs and lower production costs.

1. **HEAVIER PALLET FEEDER.** Electric driven chains assure positive action. Non-reversing movement avoids possibility of pallet jamming.

2. **PIVOTED VIBRATOR MOTOR BRACKETS** keep V-belts tight continuously and assure uniform vibration.

3. **5 H.P. VIBRATOR MOTORS** provide more powerful and uniform vibration.

4. **POSITIVE PALLET OILER,** with reservoir tank keep pallets well oiled at all times.

5. **POWERED PALLET CARRY-OUT V-BELTS** prevent block breakage and contribute to high production. Even spacing prevents bumping together of pallets.

6. **RUBBER CUSHIONED PALLET JACK** improves mold and pallet vibration.

7. **RUBBER INSULATED JACK CYLINDER** prevents leakage of oil around cylinder rod.

8. **NEW STYLE OFF-BEARING HOIST.** Faster — Smoother — Minimum of Moving Parts.

9. **DEEPER MOLDS** for more compactness.

10. **MANGANESE STEEL LINERS.**

11. **ABRASIVE RESISTANT CORES.**

12. **HARDENED PRESS HEAD SHOES.**

GET THE STORY OF THIS PROFIT ASSURING BLOCKMAKER. WRITE TODAY.

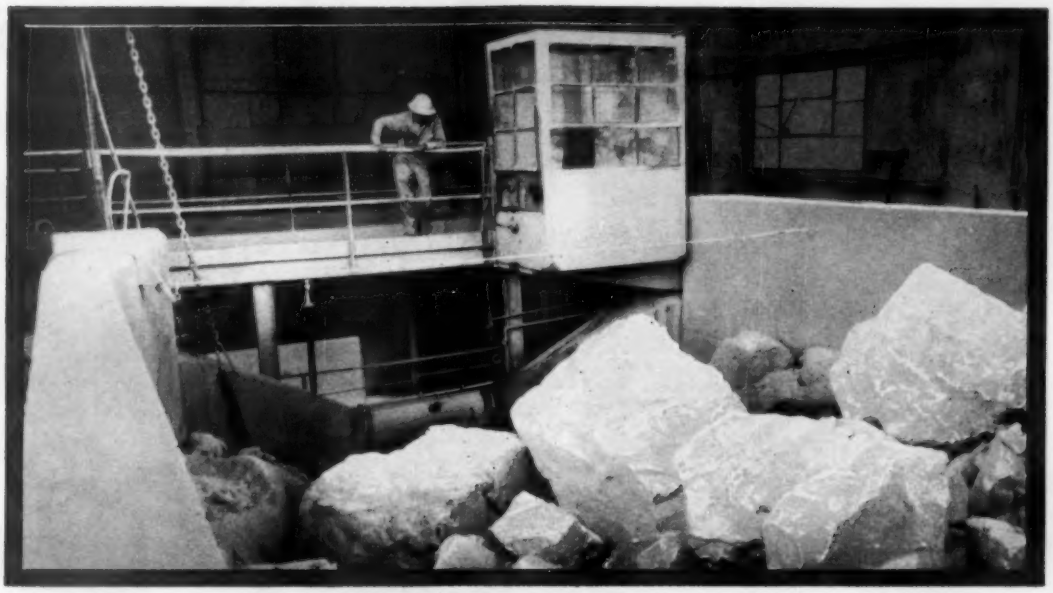
We also make the KENTHREE which makes three blocks or equivalent at each cycle.

The KENT MACHINE CO.

Canadian Distributor: Wettlaufer Equipment Ltd., 49 Merton St., Toronto 12, Ontario

CUYAHOGA FALLS, OHIO, U.S.A.
DIVISION OF THE LAMSON & SESSIONS CO.

BATCH MIXERS • CONTINUOUS MIXER • FEEDERS • ELEVATORS • DUNKERS • RACKS & ETC.



Penn-Dixie's Crunching Giants Crush "Big Ones" Down to Size

Boulders, often as big as office desks, are hauled from Penn-Dixie's quarries to the crushing machines.

With a roar that makes the crusher building quiver, they thunder into the crunching jaws of the crushers. Then the hammer mills go to work, reducing the stones to a maximum size of 2 inches, such as you see being transported up the inclined conveyor. This crushed rock is then conveyed to storage rooms awaiting pulverization. The process of making cement has barely begun because, from quarry to finished product, 80 separate steps are required.

Periodic samples are taken around the clock and carefully analyzed by Penn-Dixie's laboratory technicians. Only when rigid quality specifications have been met is the crushed rock further processed.

Penn-Dixie means Permanent Dependability

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New York • Philadelphia • Pittsburgh • Boston
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PENN-DIXIE CEMENT *Corporation*

Oronite® Wetting Agent "S" ...your best air-entraining admixture!

Tests recently concluded at the University of Toledo show Oronite Wetting Agent "S" qualifies completely as an air-entraining admixture and also provides considerable savings—when compared to agents generally used for air-entraining. This high quality detergent, wetting agent and emulsifier meets all requirements of A.S.T.M. specification C233-52T.

You will discover Wetting Agent "S" is readily diluted into a liquid concentrate for easy addition to ready-mix. It mixes quickly and thoroughly to give uniform air dispersion throughout the mix. The possibility of getting excess air by over-dosage is greatly minimized with Wetting Agent "S".

As an air-entraining admixture, Wetting Agent "S" is generally lower in cost than other agents—costs you less than ¼¢ per cubic yard of concrete for an air content of 5%.

For technical data and information on prices and availability, just contact the Oronite office nearest you.

ORONITE CHEMICAL COMPANY

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4221R

Plenty of Hot Water

keeps your Redi-Mix plant operating through the winter... **and more profitably** when using

Burkay®

GAS-FIRED
WATER HEATERS

says ARROW Sand & Gravel Company
Columbus, Ohio

The Arrow Sand & Gravel Company discarded clumsy, expensive and inefficient coal-fired equipment used for heating the water needed in their winter concrete mixing operation. They replaced it with three **Burkay** Model 718 units using the existing storage tank. There was a large saving in initial investment over the previous installation. Also, substantial savings in fuel cost... in space.

FREEZING temperatures need not halt your winter Redi-Mix operation. Not when you can have all the hot water from *Burkay* water heaters that you want, when you want it, and at any temperature you want so that the concrete can set before it freezes. You can supply builders and contractors through the year on schedule.

Rugged *Burkay* gas-fired industrial water heaters are the simple answer to mixing concrete dependably during freezing weather. The entire heater operation is automatic. *Burkays* require minimum care and maintenance. Compact, they fit in any out-of-the-way place. Any number of heaters can be connected up to get the volume and temperature of water you need for your plant. They will more than pay for themselves in reduced year 'round overhead. Call your A. O. Smith distributor for full information and installation details.

Three Model 718 **Burkay** heaters and a storage tank provide 1800 gallons per hour of 110 degree water. Installation was designed by John W. Cordray of Graf & Son, Columbus, Ohio.

Burkay industrial water heaters are of "all copper," corrosion-free construction • Highly efficient patented burner • Exclusive heat exchanger for maximum heat transfer and economy • Dependable • Long Life • Compact • Operates on all gases • A.G.A. approved • Bears the A.S.M.E. seal of approval • Completely automatic • Complete range of sizes to fit your needs • Fully guaranteed.

Through research ...a better way

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PERMAGLAS DIVISION • KANKAKEE, ILL.
International Division, Milwaukee 1, Wisconsin

Send for FREE information

A. O. SMITH CORPORATION
Permaglas Division, Kankakee, Illinois
Gentlemen: Please send me full details on **Burkay** gas-fired industrial water heaters for any Redi-Mix plant.

Name.....Title.....
Company.....
Address.....
City.....Zone....State.....

makers of famous **Permaglas®** *glass-lined water heaters...* **Permaglas®** *heating and cooling*

The new 1958 REX ADJUSTA-WATE MOTO-MIXER®

One look shows it. Here's a truck mixer design so far ahead, it leaves all others far behind!

NEW *Chuting System*... Larger 5-foot spout is deeper-dished for handling more concrete faster. Straight-back chute lock permits chute to be locked in straight-back position when maneuvering on and around job-site.

NEW *Blading*... Fast shrink blade imparts a severe criss-cross mixing action to materials for faster, more thorough mixing. All REX blades are *heat-treated* for twice the life... half the maintenance.

NEW *Simplified Controls*... The clutch, gear shift, brake and automatic throttle are controlled by *one lever*... easy-to-read-and-operate controls are grouped together, increasing driver efficiency by saving waste motion.

NEW *Pressure Water System*... Eliminates pump maintenance, no moving parts. Top-mounted or side-mounted interchangeable flush tanks. Completely safe!

Call, wire or write your local Rex Distributor or CHAIN Belt Company for all the reasons why Rex is "RIGHT for Ready-Mix Service!"

The "CLEAN" Look...

The clean, good looks of these *new* REX models prove their modern functional design. No corners, angles or channels to collect concrete, cement, sand or dirt. You save time and money on cleanup... keep new-machine appearance lasting longer!

CONSTRUCTION REX MACHINERY

ADJUSTA-WATE MOTO-MIXERS

LEADERSHIP... THROUGH CREATIVE ENGINEERING

CHAIN BELT COMPANY / 4665 W. Greenfield Ave., Milwaukee 1, Wis.

INDUSTRY NEWS

Producers' Pension Plan Chosen by Arbitrator

Southern California's ready mixed producers finally, after a three-month strike in 1955 and two years of arbitration, won the right, along with sand and gravel producers in the area, to establish a locally-controlled pension plan for their employees.

This was the recent decision of arbitrator Dr. Paul Prasow who decided in favor of one of the producers' offered plans over the plan which the Western Conference of the Teamsters Union was seeking, according to the Los Angeles Times.

Dr. Prasow, who conducts classes in industrial relations and personnel managements at UCLA, noted that his decision was influenced by testimony (introduced in the proceedings) of Teamster officials during the recent Senate Labor Rackets Investigating Committee hearings.

In choosing the C-2 pension plan, out of the 12 separate plans submitted by the 29 employers involved, Dr. Prasow said "employees would in most items receive over-all benefits at least equal to the Western Conference of Teamsters' plan and in some items would receive benefits in greater amounts (or find eligibility requirements easier) than in the WCT plan."

Retroactive to July 1, the C-2 plan has these provisions:

1. A pension trust fund consisting of $.10 per hour for every hour worked by each hourly employee will be set up by the employers. (This will amount to approximately $17.30 per month per employee.)

2. Eligible employees at age 65 may retire with a maximum pension (as of now) of $85 per month.

3. Employees switching to another employer who has a plan with the Teamsters, or visa-versa, will have certain rights under the plan from which he transfered.

4. Six trustees, three from the side of the employers and three from the five local Teamster unions presently having contracts with the plants involved, will administer the fund.

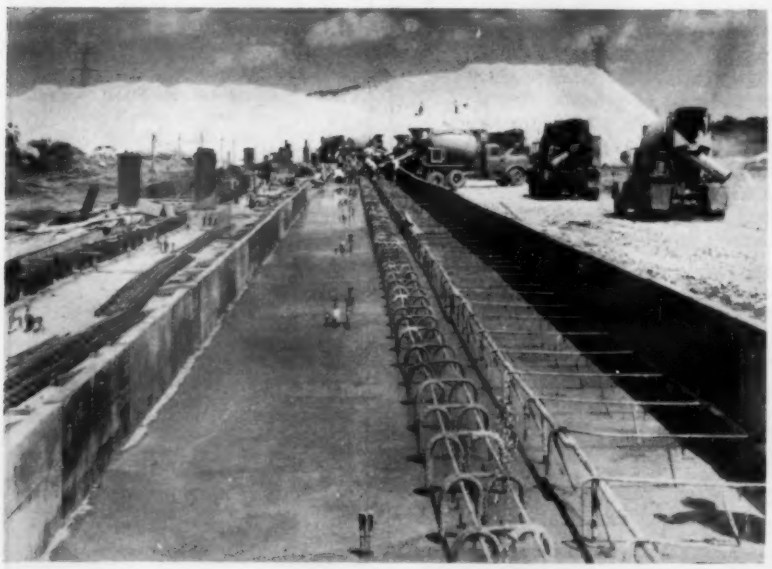
■

Record Pour Helps Finish New Prestressing Plant

One of the largest known concrete pours on record in the Chicago area, 1902 cubic yards in eight hours, was made recently by Dolese & Shepard Company during construction of the prestressing plant of American-Marietta's Lewistown Pipe Division, located near LaGrange, Illinois.

The new plant has gone up through the combined efforts of the Lewistown Pipe Division, M. A. Lombard & Son Company, contractor for the work, and Dolese & Shepard Company, supplier of the ready mixed concrete. The entire installation from excavation through cleanup required only 20 working days for completion.

The finished plant includes one prestressing bed 691 feet long, and a second bed 661 feet long, containing a total of 200 tons of reinforcing steel and 4,000 cubic yards of concrete. Designed for a maximum moment of 45 million inch pounds, these beds are the longest known built to withstand such a tremendous prestressing force. They will be put to use to furnish more than 52,000 tons of prestressed concrete bridge girders for the Tri-State-Route under a contract with the Illinois State Toll Highway Commission.



Southeastern Association Plans November Meeting

The 14th annual regional meeting of the Southeastern Concrete Masonry Association is scheduled November 3-5 in the Claridge Hotel, Memphis, Tennessee. George W. Katterjohn, Katterjohn Concrete Products, Paducah, Kentucky, is handling details of the meeting.

Two of the scheduled speakers on the program will be National Concrete Masonry Association Executive-Secretary Walter W. Underwood and President Philip Paolella. They will discuss the National Concrete Masonry Association regional organization plan.

■

PCA Names D. Olmstead as Ohio Field Representative

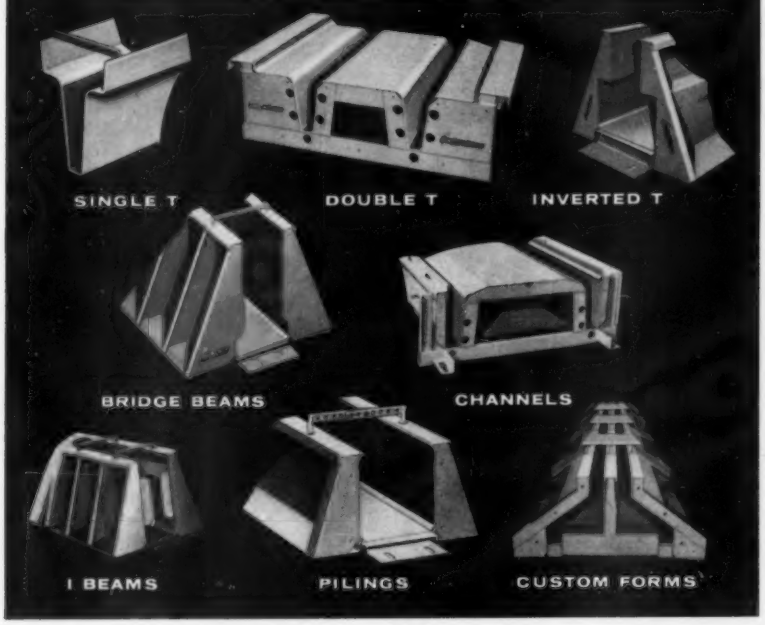
D. C. Olmstead has been appointed northwestern Ohio field representative at Toledo by the Portland Cement Association. Mr. Olmstead succeeds E. F. Boggs, who becomes the representative for the southeastern part of the state.

Now!

FORM-CRETE

TRADE MARK

OFFERS THE MOST COMPLETE LINE
of CASTING FORMS EVER PRODUCED!



THE FORM-CRETE line of more than 22 basic forms represents the most versatile group of steel forms ever produced for casting prestressed and precast concrete products. Each form has been carefully designed to insure a uniform, smooth edge product. Die-formed product release angles permit easy trouble-free stripping of product. Heavy-gauge steel construction means indefinite form life. What's more, many Form-Crete forms can be quickly adapted to produce a variety of varied finished products. And where special needs call for a custom form, FMC has the know-how and facilities to turn it out quickly and efficiently. That is why we say, call on Form-Crete, rely on Form-Crete for the finest in steel forms delivered on time, when and where you want them.

SEND FOR NEW CATALOG. Just off the press, this new Catalog illustrates all of the many Form-Crete forms now available including the new PCI and AASHO approved Bridge Beams.

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LAKELAND, FLORIDA • RIVERSIDE, CALIFORNIA

Please send me a copy of your new Catalog No. 300.

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Calendar . . .

1957

OCTOBER 17-18	Western Concrete Pipe Association — Fall Meeting — Hotel Westward Ho — Phoenix, Arizona.
OCTOBER 17-19	Empire State Sand, Gravel and Ready Mix Association — Fall Meeting — Lake Placid Club — Lake Placid, New York.
NOVEMBER 3-5	Southeastern Concrete Masonry Association — 14th Annual Regional Meeting — Claridge Hotel — Memphis, Tennessee.
NOVEMBER 4-6	American Concrete Institute — Regional Meeting — Benjamin Franklin Hotel — Seattle, Washington.
NOVEMBER 17-19	Southeastern Concrete Pipe Association — Tenth Annual Convention — Key Biscayne Hotel and Villas — Miami, Florida.
DECEMBER 2-6	Committee C-1, Cement, and Committee C-9, Concrete — American Society for Testing Materials — Fall Meeting — Fortin de las Flores, Mexico.

1958

JANUARY 16-18	National Concrete Products Association of Canada — Annual Convention — Chateau Laurier Hotel — Ottawa, Ontario, Canada.
JANUARY 22-23	Wisconsin Concrete Products Association — 38th Annual Convention —Loraine Hotel — Madison, Wisconsin.
FEBRUARY 9-13	National Ready-Mixed Concrete Association — 28th Annual Convention — Chicago, Illinois.
FEBRUARY 9-13	National Sand and Gravel Association — Annual Convention — Conrad Hilton Hotel — Chicago, Illinois.
FEBRUARY 10-14	American Society for Testing Materials — Committee Week — Hotel Statler — St. Louis, Missouri.
FEBRUARY 17-19	National Concrete Masonry Association — 38th Annual Convention — Chicago, Illinois.

PLANT NOTES

SAMSON CONCRETE INDUSTRIES, INCORPORATED, Miami, Florida, has replaced its old block plant with new ready mix and concrete block producing facilities. Ready mix capacity is 2,500 yards daily. Installation of a second block machine will boost volume to 20,000 units per day.

LOUISVILLE BUILDERS SUPPLY COMPANY, Louisville, Kentucky, has leased a ten-acre site in Louisville for a prestressed concrete panel plant.

BUNDY CONCRETE PIPE COMPANY, New York Mills, New York, has purchased a five-acre plot at Watertown for construction of a branch plant. The proposed plant will manufacture concrete pipe which will be used principally for storm water sewers.

MAXYMILLIAN, INCORPORATED, of Adams, Massachusetts, has constructed an automatic concrete batching plant which increases capacity fivefold. The plant was completed in two and one-half months to provide concrete for flood control work at North Adams.

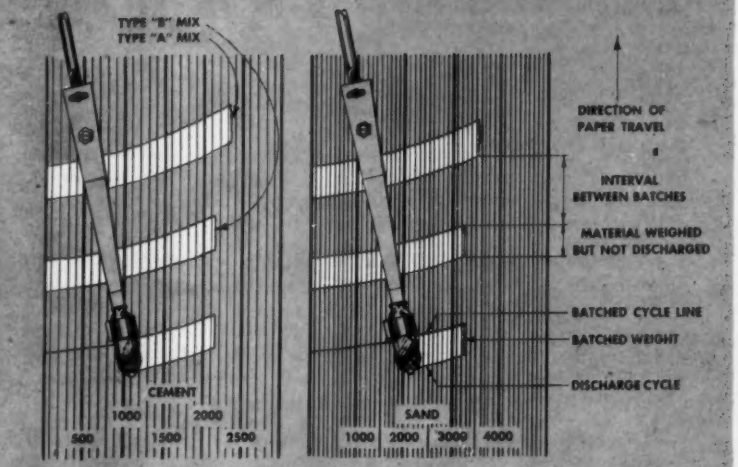
NATIONAL CEMENT PRODUCTS COMPANY of Toledo, Ohio, is constructing a building for the manufacture of lintel block and special block units. The expansion is expected to double the manufacturing space for production of the special units.

PORTSMOUTH MIXED CONCRETE, INCORPORATED, Portsmouth, Ohio, has acquired Basic Construction Materials Company, and Goldcamp Sand and Gravel Company, two ready mixed plants at Ironton, Ohio. The Portsmouth firm is a subsidiary of Goff-Kirby Company of Cleveland. The names of the Ironton plants will be changed to Ironton Ready Mixed Concrete Company.

ELYRIA CONCRETE INCORPORATED, Elyria, Ohio, is open for business. The ready mix plant was purchased in Cleveland, moved to Elyria, and is capable of producing 500 to 800 cubic yards of concrete per day.

BE SURE OF

correct batch-weight *and record*

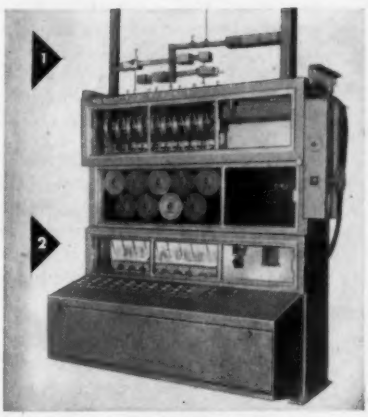


with Johnson graphic recording . . .

There is an increasing need in the ready-mixed concrete business for a complete record of every batch weighed out at the plant. With Johnson graphic pen-recording system, you're always *sure* of accurate batch-weight and record, because there's *direct transmission* of weight from each batcher to individual dial scale on the control cabinet.

ONE RECORD — All materials are recorded on one roll — no need to match 4, 5, or more charts to check a batch. Pens are carried on the ends of arms, rigidly attached to dial-unit pendulum shafts. Pen lines provide a quick way to check material batch-weights, show return-to-zero of each pen, and immediately indicate any material hang-up during charging or discharge. The line of the curve *tells at a glance* that all mixes are correct, as specified. Chart is printed on plain white paper, just before it passes the battery of pens. This eliminates any errors, where pre-printed paper might stretch or shrink.

TIME & DATE STAMP automatically records on the chart, the year, month, day, and time of day *to the nearest minute* each time a batch is discharged. No record is complete without this information. *A batch-sequence numbering stamp* positively identifies each batch on the chart for a *permanent record*. It can be re-set to zero each day. Read all about it in free 44-page catalog on "Johnson Concrete Plants". Ask Johnson distributor for your copy, or write us.



Johnson automatic Batch Controller (above) selects 7, 12, 120 different mixes for single material batchers and 60 mixes for multiple batchers — has repeater for re-batching.

1 Moisture-compensating beam shows dry weight on sand dial, can be used on fine aggregates, too. You just set up mixes for dry weight, and adjust compensator to the correct moisture percentage from time to time as required.

2 Note battery of recording pens with time and date stamp, and the batch-sequence stamp, which register a complete record *all on one chart*.

C. S. JOHNSON CO., *Koehring Subsidiary* **CHAMPAIGN, ILL. • STOCKTON, CALIF.**

A9BW

CONCRETE PLANTS • BATCHERS • BINS • ELEVATORS • SILOS • BUCKETS

Everybody's Business

BUSINESS

• Recent events and statements by businessmen have bolstered all sides of the vexing question as to whether the nation's economy is headed for a downward turn, is leveling off, or is going to continue rising as it has over the past few years.

• A recent survey of small businesses, taken by Dun & Bradstreet, indicated that the men leading these businesses were quite confident of the future. A healthy majority—three out of four—felt that their operations would continue to grow. This figure was only slightly under the four out of five that said their businesses had moved forward in the past few years. Only a small segment—two per cent—indicated that their operations were on the brink of tottering.

• Coupled with this heartening report were the facts that personal income and employment in recent months have been at very high levels. Though employment fell slightly in August, due to the exodus of school-age summer workers, personal income reached a peak rate of $347.3 billion annually.

• Also, the home-building industry, which had been sagging for two years, took an upturn. Private housing starts in August were at an adjusted annual rate of over one million units per year. This is still below the corresponding figures for 1956 and 1955, but evidences of strength are indicated. At least for now, it looks as if the lows were reached in the early spring months of this year. Then the rate was very close to an annual rate of 900,000 per year.

• A further bit of healthy news is the increase in applications for financial aid coming in to the Federal Housing Administration. A tally of requests received in August showed an increase of 21 per cent over July of this year. This increase followed on the heels of announcement of new interest rates and lowered down-payment schedules on F.H.A. insured home mortgages.

• In opposition to the above outward signs of a fairly lively—or at least an even—economy is the general fall-off that has been plaguing the stock market over the past months. This, to many, is a sign that at least investors are somewhat worried about the future.

• Bankers, too, are worried, both about inflation and what they feel is the natural aftermath—a slowdown. Meeting in Atlantic City, New Jersey, the bankers were quite outspoken about their views of the present-day inflationary cycle. And not a few of them mentioned the next period of U.S. economy as a "breathing spell" or "period of consolidation."

• As a result, bankers admitted in private that they were being more selective about loans. Previously, they just didn't have the money to put into loans, but now they're beginning to wonder about the future and customers' ability to repay.

• Pitted in between the optimistic and pessimistic approach to the immediate future is the view held by Carrol M. Shanks, president of the Prudential Insurance Company. He says his company has felt no slackening in demand for mortgage loans. On the subject of high interest rates, Mr. Shanks feels that they have gone about as far as they can go. He, like a number of others, feels that interest rates will go down slightly. His terminology for the next period is a "rolling readjustment."

Former ACI President and Pioneer in Concrete Dies

H. L. Kennedy

Henry L. Kennedy, sales manager of the construction specialties department of Dewey and Almy Chemical Company Division of W. R. Grace & Company, died September 10 at Cambridge, Massachusetts.

Mr. Kennedy pioneered the use of grinding aids for the efficient manufacture of portland cement and air entraining agents to improve the durability of concrete. He was president of the American Concrete Institute in 1953-54, a director of the institute for several years, and had been an active member on several committees of the American Society for Testing Materials. Mr. Kennedy was the author of papers, articles, and books on cement and concrete technology.

■

NRMCA Booklet Capsules The Ready Mixed Story

As a part of its continuing program of helping ready mixed producers keep their customers and local citizenry informed, the Committee on Public Relations of the National Ready Mixed Concrete Association has produced a small, fold-out booklet called "The Ready Mixed Concrete Story."

Briefly, and in easy-to-understand terms, the publication takes up: what ready mixed concrete is; why ready mixed concrete; how concrete is mixed; how a ready mixed plant operates; method of operation; delivery; and what the industry means to you (the people in the community).

Illustrations within the various subdivisions of the booklet diagram and explain the visible facilities of a ready mixed plant so that the reader has a more accurate knowledge of plant lay-out, ingredients used to make concrete, and flow of materials through a producer's plant.

Available to member producers at a nominal charge, the booklet has room on the back cover so that the individual producer can arrange to imprint his company's name prior to distributing copies.

Otto Buehner Will Speak at ACI Regional Meeting

Seattle, Washington, will be host to the American Concrete Institute, November 5-6, 1957, for the Institute's 10th regional meeting. The two-day program at the Benjamin Franklin Hotel will emphasize the latest concrete projects and techniques in the northwest.

Otto Buehner, president of Otto Buehner & Company of Salt Lake City, Utah, will be featured as one of the speakers on the technical program. His paper will encompass the range of colors and textures made available to precast concrete units through the Mo-Sai System. Mr. Buehner will describe production of module-sized units, as well as intricate grill and inlay work and other diversified special applications.

Other speakers will discuss concrete for radiation shielding, shear walls, and plastic flow characteristics of lightweight aggregate concrete. Reports on warping due to shrinkage, prestressing cylindrical shells, prestressed lift-slabs, precast colored panels, and precast and prestressed construction will be included.

■

Vice-President of Koenig Concrete Block Co. Dies

Services were held July 9 for Emil L. Koenig, vice-president for last 18 years of the William S. Koenig Concrete Block Company, Cincinnati, Ohio. Mr. Koenig passed away July 5 after a year-long illness.

■

Wire Reinforcement Group Names Executive Heads

Wayne O. Stoughton and Earl C. Planett were voted president and vice-president, respectively, of the Wire Reinforcement Institute during the recent annual meeting at White Sulphur Springs, West Virginia.

Mr. Stoughton is manager of sales of Pittsburgh Steel Products, a division of Pittsburgh Steel Company. Mr. Planett is president and owner of Planett manufacturing Company of Downey, California.

Managing director of the institute is Frank B. Brown. One of the research and educational aims of the institute is the improvement of the construction types that welded wire fabric reinforce; such as highways, concrete buildings, concrete pipe, and concrete slabs.

■

Idaho Concrete Products Founder, D. Strong, Dies

Dale M. Strong, who founded Idaho Concrete Products Company, at Pocatello in 1940, passed away Sunday, August 25.

■

ACI Revises Standards Book, Inspection Manual

Latest editions of the *ACI Book of Standards* and the *ACI Manual of Concrete Inspection* are ready for distribution by the American Concrete Institute, P. O. Box 4754, Redford Station, Detroit 19, Michigan.

The books represent the most recent compilations of current American Concrete Institute standards, recommended practices, specifications.

Prices of the books, as established by the American Concrete Institute, are $4.00 for the standards book and $3.50 for the inspection manual.

■

New Association Promotes Adoption of Modular Unit

Four leading building industry groups have joined forces in organizing the Modular Building Standards Association, an organization which will boost acceptance of a program to adopt the four-inch module as a basic unit of measurement.

The project got underway at the first board of directors meeting August 12 at White Sulphur Springs, West Virginia. Officers were elected and bylaws approved.

The four sponsoring organizations, American Institute of Architects, Associated General Contractors of America, National Association of Home Builders, and Producers' Council, Incorporated, will initiate membership programs within their respective industries.

Mr. C. E. Silling, chairman of the American Standards Association committee on coordination of dimensions of building materials and equipment, is president of the new organization. Other officers are James E. Coombs, Associated General Contractors of America, first vice-president; M. Edwin Green, American Institute of Architects, second vice-president; H. Dorn Stewart, Producers' Council, Incorporated, secretary; and Martin L. Bartling, Jr., National Association of Home Builders, treasurer.

President Silling noted that the adoption of the four-inch module as the basic unit of measure will assist manufacturers in effecting economies by standardization.

■

ASTM Committees to Meet December 2-6 in Mexico

Technical committees C-1 on cement and C-9 on concrete and concrete aggregates, American Society for Testing Materials, are going south of the border December 2-6. Both meetings will take place at Fortin de las Flores, Mexico, to give members an opportunity to study structural uses of concrete.

■

Cement Production

Production and shipments of finished portland cement in June 1957 were both down by eight per cent, according to the United States Department of the Interior, Bureau of Mines. One hundred fifty-two plants reported a production of 26,462,000 barrels this June, compared with 28,771,000 barrels in June 1956.

A factor in the June production figures is the cement strike, which resulted in a shut-down of 10 plants during May and three in June.

Mill shipments in June 1957 totaled 29,545,000 barrels, compared to 31,996,000 barrels in June 1956.

Stocks of 29,880,000 barrels on June 30, 1957, were 32 per cent higher than the 22,685,000 barrels on hand at the end of June 1956.

● Shadowal patterns enhance Rayco store entrance,

maintain humble dignity of a community Lutheran church,

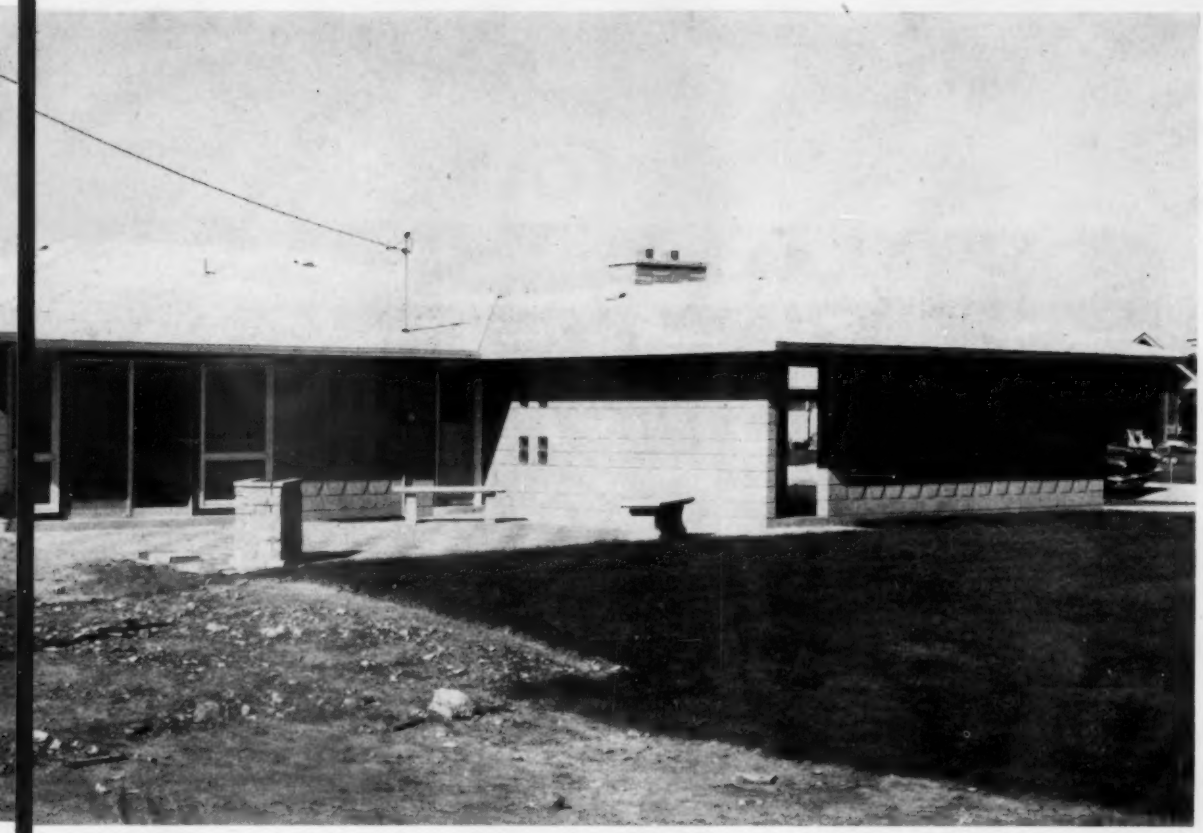
and add sculptured touch to George Callas home.

Shadowa

Best Block Company's units are becoming a familiar sight. Above they are on exhibit in the Parade of Homes.

You notice a Shadowal exterior! Whether you're driving along a highway, or going up a winding driveway overhung with trees, the moment you see a use of this block with "one thousand" faces, it strikes you as something different.

Milwaukee's new Rayco seat cover store takes advantage of this distinctive feature. Situated on the north side of a well-traveled thoroughfare, the building's east, south and west faces—all of Shadowal and glass—get the full play of the sun, when it's out. And while the motorist is still city blocks away from the location,



in Use . . . in Milwaukee

he sees the pattern of lights and shadows. Even when the sun's hidden, the pattern stands out clear and sharp.

So far, Best Block Company, Milwaukee, has furnished Shadowal units for at least three houses, a church, and the Rayco store, all in the surrounding area.

Less conspicuous than the Rayco store, but still just as obviously faced with Shadowal are the elegant homes of Jack Collins, designed by A. A. Tannenbaum, and George Callas, designed by Maynard Meyer and Associates. Both these contemporary houses, now in varying stages of construction, are on wooded, ravine sites in Milwaukee's northern suburbs. Both are set well back from the road so that a visitor's first impressions come at him through the trees lining the sides of the driveways. Here again, the Shadowal designs, formed by interweaving the recessed-face block, are very noticeable, though softened somewhat by the angular branch formations of the trees. Closer up, you realize that the overhanging branches and leaves form a still different, and moving design of sunlight and shadows on the block wall, which already has its own pattern.

Mr. Collins, an industrial designer, was very enthusiastic while discussing Shadowal. He mentioned how he and his wife had examined and rejected just about every available material that could be used on the exterior walls of house. But Shadowal appealed to both Mr. Collins and his wife. "It is natural," he said. And it fits into our natural site; yet the design formed by the beveled block gives the wall a relief—a relief which has an Aztec flavor about it.

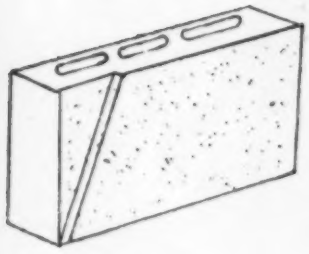
Shadowal is also brought into the interior of both the Collins and Callas houses.

The other two structures that have Best Block Company's Shadowal are a house in this year's Milwaukee Builders' Association Parade of Homes and a small Lutheran church. Maynard Meyer and Associates were the designer for the Parade of Homes house, and Julia Fahrenkamp was the architect for the church. An interesting use of shadowal lines the church's exterior beside its entrance. Right and left bevel units are stacked alternately, giving the wall a diamond pattern, which taken as a whole presents a very simple cross.

Both the church and the Parade of Homes house are built on open sites, free of trees.

Of these five Shadowal structures, the Parade of Homes house is the only one to use colored masonry units. The effect of the pinkish-brown surface color on the Shadowal units lessens the characteristic highlights, shadows and textured appearance.

Speaking of selling these recessed-face units, Best Block Company's Shadowal salesman, Robert Hogan, said that there really are 1,000 pat-



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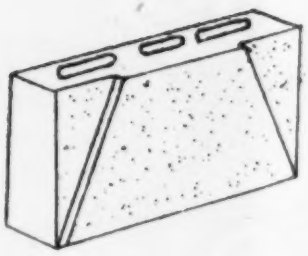

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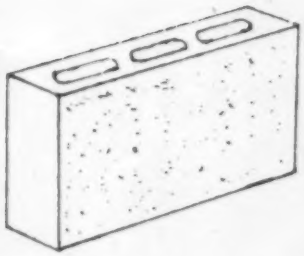

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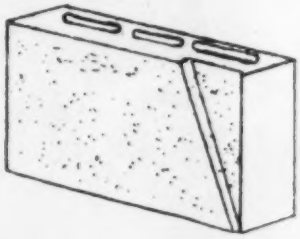

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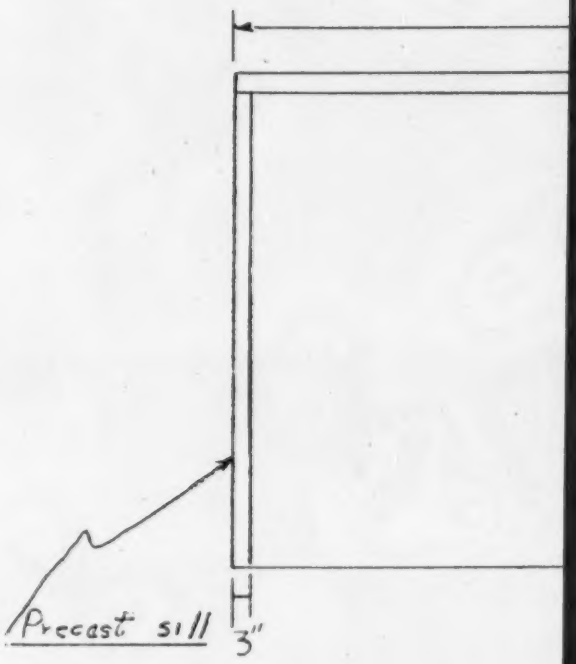


SOUTH

Shadowal going up .... From cube, to job site, to

terns, or varieties of patterns, possible with these block. "Shadowal gives the architect an inexpensive way of expressing himself."

But, Mr. Hogan went on to say that the architect has to be careful with his design. Dimensions must be exact, and considerable care must be given to designing with the pattern in mind while also remembering just what sizes and types of block—both shadowal and standard units—are available.

Another small problem, which Mr. Hogan believes he has somewhat solved, comes as the mason is laying the Shadowal units in a wall. Mr. Hogan has made a standard chart showing all his company's styles and sizes of block—each block is numbered. Then, for each Shadowal installation, he makes a separate drawing of the wall and inserts the required block numbers from the standard chart into the area where they would fit. In this way, the mason can easily refer to the standard chart, select the specific block he needs for the particular spot, and then put it in its place.

Like hundreds of other producers at the National Concrete Masonry Association's 1956 convention in New Orleans, Best Block Company's management was shown a preview of Shadowal. Shortly after the convention, Best Block ordered machine attachments for production.

Their first units—units with a ¾-inch recess—came off one of their machines in August, 1956. These units were used in the George Callas house and the Rayco store.

As with some of the other producers experimenting with Shadowal, Best Block found a consistent small crack developing along the inner edge of the bevel. This crack, though, did not go through to the core of the block and, therefore, did not impair the quality of the block other than to lessen somewhat the beauty of its physical appearance.

These same fine, shallow cracks continued even after Best Block went into production of the now, fairly-well-standardized, ⅜-inch, recessed-face units.

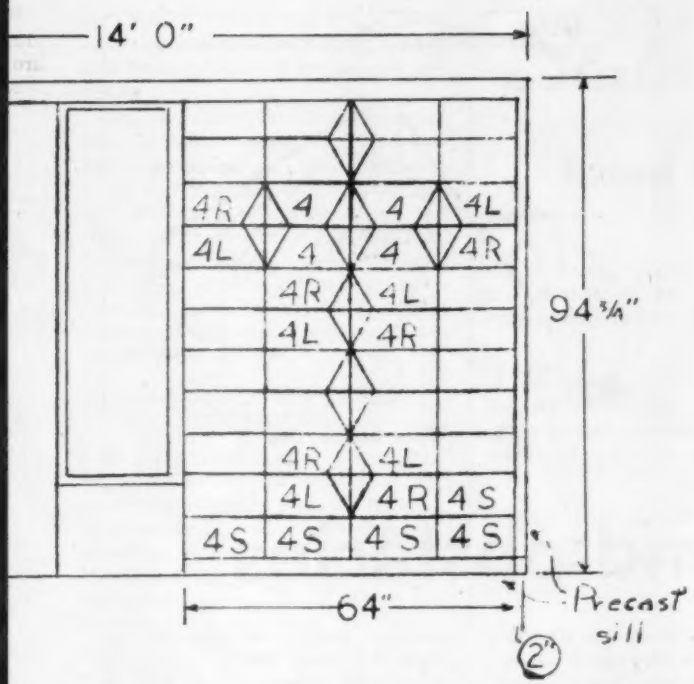
But, according to Paul Bronson, president of Best Block Company, this and other small production problems have since been licked. Mr. Bronson said that the last of the production kinks was ironed out by increasing vibration speed, while, at the same time, reducing vibration activity. Result is a denser block.

Best Block, so far, has limited its production of Shadowal to lightweight units. They use slag, with a ⅜-inch maximum particle size, as the aggregate. A random 8 x 8 x 16-inch block with a double bevel weighed just slightly under 27 pounds.

As to production rate, Mr. Bronson said that they were producing at the same machine cycle as with standard units.

One thing that pleased Mr. Bronson immensely was the price the company was getting for Shadowal. He said they were charging five cents over the going rate for a standard unit—and this was in the midst of a price war on block in the Milwaukee area. What with the little extra care necessary with this new bevel-faced unit—finer aggregate gradation, 20-minute change-over time, and stacking the units separately in the yard—Shadowal block amounts to a very profitable sales item.

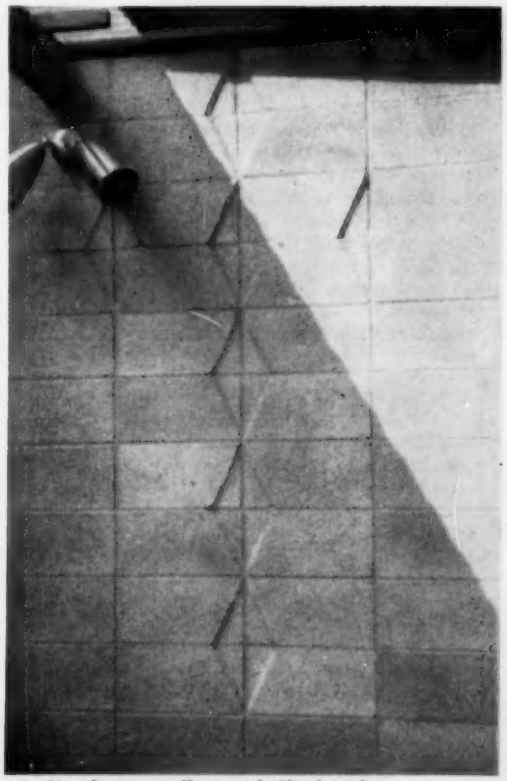
(Block machinery concerns who have notified us that they are manufacturing Shadowal attachments are listed in the *News from the Manufacturers* section.)



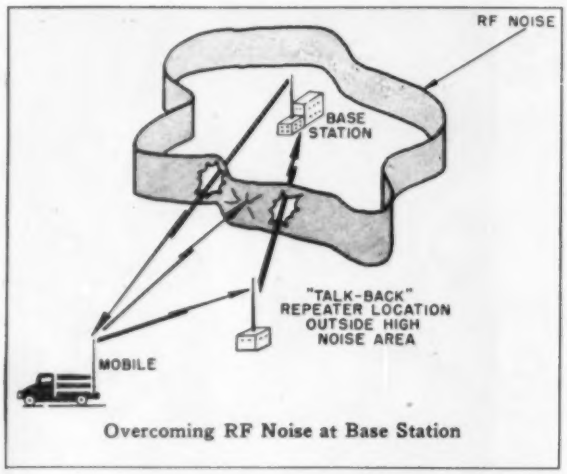
ELEVATION EAST SECTION

placement according to pattern, to finished wall.

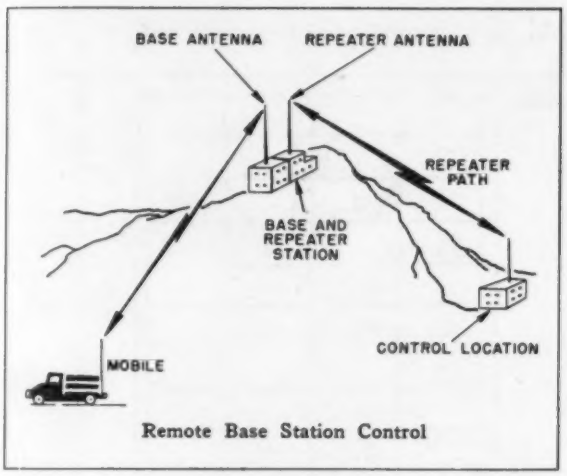
● Placing Shadowal at Collins house



● Simple cross effect with Shadowal



Overcoming RF Noise at Base Station



Remote Base Station Control

Talking around obstacles

Radio repeaters can be utilized to extend communications range, to transmit over obstacles and eliminate "dead spots" in low areas, and to avoid high noise levels at the base station location.

"TALK BACK" PROBLEMS

There are a number of conditions which can make it difficult for the mobile unit to "talk back" to the base station. Base station transmitter power is usually greater than that of the mobile unit and the antenna is usually higher enabling the base station to "talk out" farther than the mobile units can "talk back" to the base station or talk to other mobiles. Even though base station elevation aids "talk back", it is often difficult or impossible for mobile units to "talk back" to the base station when there are intervening obstacles. When the base station is located in an area of high RF (radio frequency) noise, such as generated by industrial electronic equipment and other radio stations, received signals must be strong enough to capture the base station receiver.

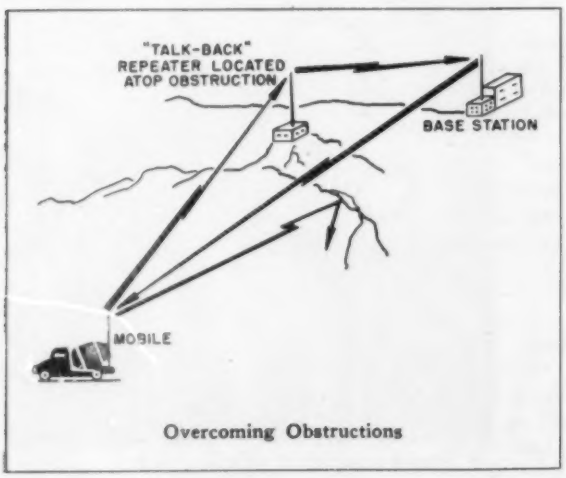
Talk back problems are usually best solved by utilizing a repeater to receive the mobile transmission and re-transmit it back to the base station location. Such a repeater known as a "talk back" repeater, receives on the mobile frequency and automatically re-broadcasts the signal to the base station receiver on a different frequency.

REMOTE BASE STATION CONTROL

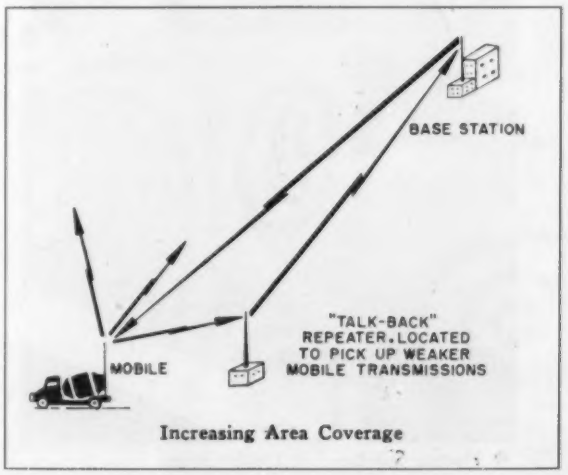
At the control point, elevation of the antenna to a suitable height for optimum system performance by means of a tower may be uneconomical and/or impractical. It may be more feasible to move the base station to a better location, and control it remotely with a point-to-point radio circuit.

This type system utilizes a repeater at the remote base station location which provides two-way, point-to-point communication between the remotely located base station and a radio station at the control point known as the "control" station.

At the remote base station location, the repeater and base station are so interconnected that the receiver of one controls the transmitter of the other, and supplies it with audio modulation. In this way signals are passed through the repeater in two directions, from the control station to



Overcoming Obstructions



Increasing Area Coverage

the mobile trucks and from these same trucks back to the control station through the base station and repeater.

The repeater system is so designed that the control station can interrupt any received mobile signal. In order to do this, separate antennas are required for the transmitter and receiver of the repeater station. This facility is provided to give the control station priority in transmitting a message to a mobile unit even though another mobile is transmitting to the control station.

TALK BACK REPEATER LOCATIONS

If a talk back repeater is used to overcome an obstacle such as a hill, mountain or group of tall buildings, it is usually located on top of the obstruction. Mobile units are then able to talk over the obstruction. The base station must be capable of talking out to the entire service area.

When a talk back repeater is used to increase area coverage, the repeater should be so located that (1) the mobile units can communicate with the repeater, and (2) the repeater can communicate with the base station. The base station transmitter must have sufficient power and the base station antenna must be suitably located to enable the base station to talk to mobile units anywhere in the area. Several talk back repeaters in different locations may be utilized to obtain full coverage of the entire delivery area.

TWO-WAY REPEATER LOCATIONS

In selecting the site for the remotely controlled base station, the main consideration is placement of the antenna at a high elevation to obtain the desired system coverage. The site must also enable point-to-point radio communications with the control station which is usually located in the vicinity of the point of control or dispatch. A typical repeater and base station location in an urban area would be atop the highest available building in the area or on high ground adjacent to the urban area.

Two-way repeaters can be used in place of high expensive antenna towers not feasible to construct. They also enable the base station to be located away from high ambient RF noise which reduces the "talk back" communications range of mobile stations.

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Statement of Principles

National Ready Mixed Concrete Association

The ready mixed conrete industry was born of a need for high production of an established and recognized construction material, reasonably priced and conveniently distributed.

That it has met and is continuing to meet this need is evidenced by its growth during a few years to the position of the largest consumer of portland cement, and the producer of more than a billion dollars worth of concrete annually.

With this growth of our industry we recognize and acknowledge the responsibilities that are incumbent upon us and are therefore dedicated to the accomplishment of the following principles and policies:

1 To operate our business on the highest plane of ethics which will reflect credit upon ourselves, our industry and our community.

2 Constant consideration of and contribution to the welfare, prosperity and goals of our community and the merger of our interests with those of the public in our area.

3 To maintain our plants, trucks and all equipment in such a way that they are assets to the community and examples of the identification of our industry with the safety, cleanliness and appearance of the area in which we operate.

4 Operation of all our equipment in such a manner that safety and consideration for life and property are of primary importance, and so that we may be an example to others in these vital matters.

5 To strive constantly for improvement of our product through better equipment, materials and methods so that it can be used with the confidence it rightfully deserves.

6 To be ever mindful of the importance of service to the builder as an aid to the proper discharge of his responsibilities to the owner and to render to him the benefit of experience for the further enhancement of our importance to his industry.

7 The establishment and maintenance of sales policies giving our customers every advantage consistent with a proper return on our own investment.

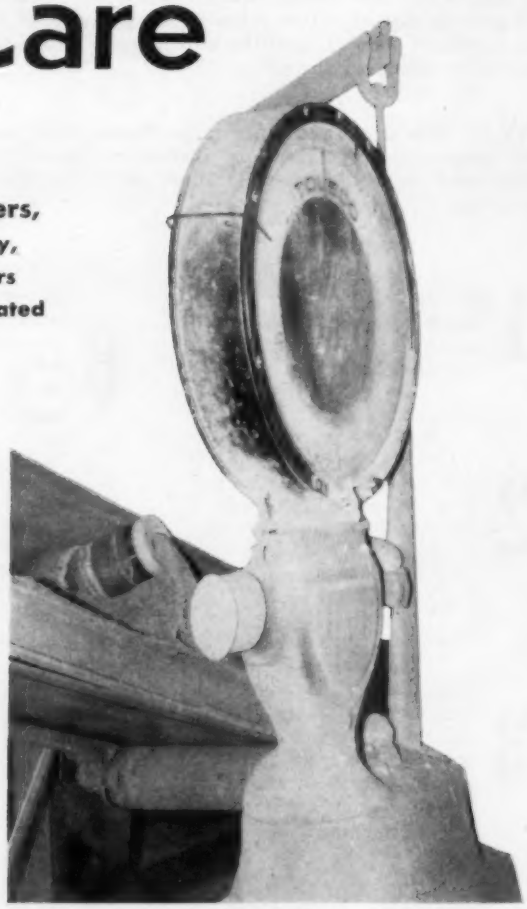
8 To make use of the latest technical developments and research which will enable us to give the designer the widest latitude for his creative thinking for the use of our product.

9 To establish and maintain a standard of working conditions that will attract high calibre personnel necessary to perform the exacting job required to produce a quality product.

10 Encouragement to employees through training and instruction to recognize the importance of doing their job well, and with a proper consideration for the interests of the public as well as those of their employer and customer.

Scale Care

By Arthur Sanders,
Executive Secretary,
Scale Manufacturers
Association, Incorporated



Are you taking proper care of your scales? This is an important matter for, when you come to think of it, a major share of everything you buy and sell, and most every batch of concrete mixed is done on the basis of weight.

In batching for concrete, correct proportioning is significant to the quality of your product. Too little cement or too much water can weaken the concrete and be costly to the buyer-user, exposing the plant to loss of future business and possible extravagant claims for reimbursements. Too much cement — the high cost ingredient — can be costly to you and will reflect itself in your profit and loss statement. No ready mixed plant or concrete products operation can afford the risk of scale errors, even those errors that seem relatively small, as they are multiplied by the number of weighings which your scales do in a day, week, or month.

Yet, it's often incredible how little care or appreciation many persons give to their scales. Let me cite you an interesting example from your own concrete industry. It was reported by Deputy Sealer Nelson of a California county, who recently discovered what he considered to be the "prize" do-it-yourself job of his experience.

While inspecting the scale of a ready mixed concrete plant, Sealer Nelson came across exceptionally large errors reflected on the scale dial when he applied his test weights — throughout the range of capacity. Upon examining the scale's lever system, he discovered something was amiss and he asked the owner what the reason was. The man proudly told him he had supervised the construction of the entire plant and could see no reason for hiring a mechanic to install his scale.

There was just one slight hitch. When he got to the point of installing the scale levers, they didn't fit in the space provided so he cut off three inches of the extension lever and welded the end back on. After this, the scale didn't seem to function just right, so he weighed himself and found an "error" in the indicated weight. So, he adjusted the dial and thought he was correcting the maladjustment he had put in the basic weighing elements.

The upshot of all this was that, when Sealer Nelson tested the scale with accurate thousand pound test weights, the weighing device showed an astonishing error of 4,000 pounds of overweight at the 25,000 pound test! At 12,500 pounds — the weight of their average concrete batch — it took 13,500 pounds of materials to register 12,500 pounds on the dial.

And the owner wondered why he couldn't get a "full batch" in his trucks. The man had been working for two weeks on this basis before (fortunately for him) the mistake was discovered.

"Needless to say," reports Sealer Nelson, "the owner needed no urging to have a recognized, reliable scale mechanic make the necessary repairs."

This is an unusual case, only to the extent that the owner cut down the scale to fit. He made his first mistake in deciding to install it himself. That's a job for only a scale expert with years of experience. It does make the point, I believe, that it takes proper installation of a well-built scale to get accurate, reliable weighing performance. Thereafter,

in the interest of the user, it should be properly maintained, if that performance is to continue.

As a companion article in the January 1957 CONCRETE pointed out, weighing conditions are especially difficult in this industry because of the adverse conditions under which scales must work. Dirt, dust, and moisture are enemies of scale accuracy. When they get into the working parts of scales, they are apt to induce a build-up of friction and impair the accuracy of the weight determinations they give.

To aid in the preparation of this article, I contacted members of the Scale Manufacturers Association and asked them to submit significant suggestions for proper maintenance of scales in the concrete industry. Here, condensed in capsule form, are their recommendations:

Initial Installation

At the very outset—when plans are being drawn for the erection, rebuilding, modernizing or expansion of a concrete plant—it is imperative that scale experts be consulted to: (1) Select the proper weighing machines to do your job accurately and dependably, and (2) To correctly design your facilities to provide for proper installation and to permit efficient operation, testing and maintenance.

Even the most costly scale cannot give satisfactory service if improperly installed.

When the actual installation is being done, it is advisable to have an experienced scaleman supervise and assist in the scale job. Many times a scaleman is called in after the plant has been built, only to find that partial or even complete dismantling of the scales must be done before a proper installation can be realized. This all results in higher installation costs.

Great care must be exercised to assure proper alignment of working parts if the scale is to function properly. A poorly installed scale may operate satisfactorily for a while but soon will be the source of trouble due to some critical part being prematurely worn out or damaged.

Supporting members for the levers as well as the reading mechanism should be rigid and not subjected to severe vibrations from the mixer or car shaker.

Cleaning the Scales

Provisions should be made to facilitate cleaning of the scales. A length of air hose should be available to permit the operator or plant maintenance personnel to blow off the dust and dirt that accumulates (a vacuum type cleaner may perhaps be better). Plant design may be a prime factor in keeping the scale clean in the first place. Canvas shields connecting the discharge hopper to the weigh hopper, and covered mixers with canvas or rubber shields at the discharge end of the weigh hopper will be a great help.

Mechanical dials or electric control panels should be located in clean, dry rooms wherever possible. These are precision instruments and should be given the opportunity to function properly without the hindrance of dirt or moisture in the mechanism.

An experienced scale serviceman should be asked to give the scale a periodic cleaning. This would usually be at the time of testing.

Scale deficiencies do not speak for themselves. Like any machine or device, a scale is subject to deterioration, but, unfortunately, it will continue to perform with no indication that it is out of order.

Too often a hopper scale is installed without provision for future testing of the equipment. There may be no place upon which a scale inspector can set his test weights. This condition results in an insufficient amount of test weights being used when the scale is being checked. Even if there is a lip or rim on the hopper where weights could be applied, the job of moving the weights to the upper regions of the plant is very difficult and time consuming. Arrangements should be made at the time of scale installation so that the proper amount of test weights can be brought to bear on the scale elements.

Provisions should be made at the time of plant construction whereby suspension rods (or chains) could extend down below the mixer to ground level so as to support a platform that will receive the test weights. Naturally, this equipment would be removed during normal operations.

Removal for Repairs

Often, hopper scales are built into a plant in such a way that it is impossible to remove the scale levers for repair purposes without dismantling part of the plant itself. Naturally, this condition can only result in higher cost repair work.

Therefore, it is evident that though proper plant design with provision for cleanliness and maintenance will perhaps cost slightly more at first it will surely pay dividends in the long run. Dependable weight measurement is necessary to avoid loss of customers and financial losses in the highly-competitive concrete products or ready-mixed businesses.

● Operator inserts formula card in control panel of high-speed automatic batching equipment at Cleveland Builders Supply Company.

In these days of close concrete batching tolerances, it is more important than ever before that operators of plants seriously consider not only basic plant design but future maintenance.

Regular Inspection Helpful

One of the most helpful practices in maintaining scales in accurate working condition is frequent, regular inspection by a qualified scale mechanic. The scale mechanic makes tests with calibrated weights to find out if the scale is performing correctly. Without regular inspections, unsatisfactory conditions may arise to cause serious scale errors. Among these are: badly worn parts or out-of-adjustment condition; accumulated dirt under working parts causing friction; and rats or birds nesting around or on vital working parts, thus affecting balance conditions, proper multiplication, etc.

Actually, the charge required for a competent scale mechanic to inspect and maintain scales in good condition is preventive maintenance, similar to the foresight of the fleet truck owner who specifies regular check-ups for his trucks.

A point which cannot be emphasized too strongly in the concrete industry is the value of cleanliness. Most electrical and mechanical devices give optimum performances when they are kept as clean as possible. This is a difficult task in the concrete industry where dust conditions from sand and dry cement have an abrasive effect upon parts of the scale as well as getting into the dial heads or over and under indicators.

As noted before, it is of great assistance to have compressed air with a hose and nozzle at the scale so that working parts can be blown free of dust. To view this matter in perspective, consider the fact that your scale is a precision instrument, built to tolerances closer than those for most fits of a good automobile engine. It isn't prudent to allow dust and dirt to accumulate in a car's engine, is it? Of course not. Keeping a scale clean likewise pays dividends.

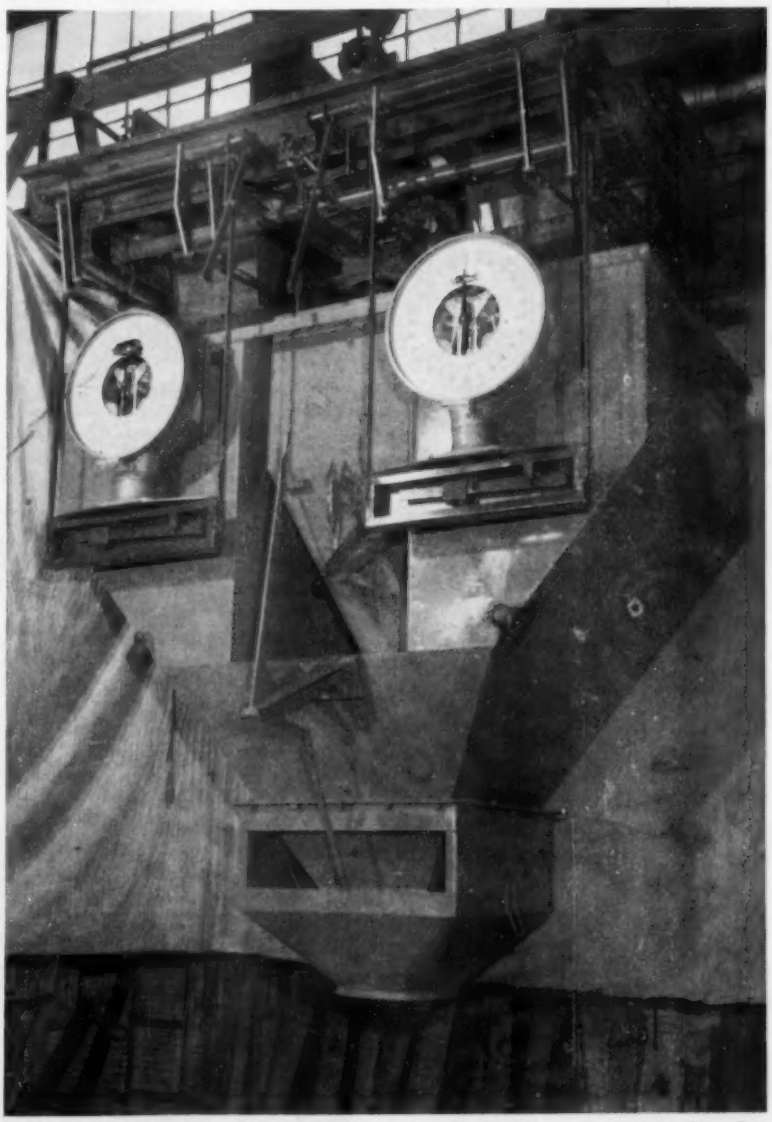
In line with keeping scales clean, a yearly paint job on scale levers and structural steel members will help keep them from rusting, and scales will give better service. If rusting does start, the metal, of course, should be cleaned thoroughly before repainting. Paint never should be put on knife-edge pivots or bearings.

Pivots and bearings should be kept coated with a protective covering of grease of a consistency that will neither melt nor freeze. Old, hard, and dirty grease should be removed and parts should be repacked with fresh grease from time to time. Never oil pivots and bearings, since oil collects dirt and dust and will cause friction and scale errors.

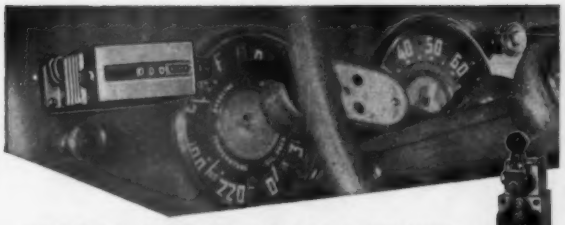
Making major modifications or changes in an installed scale is usually an expensive and unsatisfactory process. Such changes should be undertaken only with the advice of a scale manufacturer or a reliable scale serviceman.

Whenever long wear, the build-up of friction, or some other cause necessitates the grinding of pivots and the repivoting of levers, such work should be undertaken only in well-equipped scale repair shops. Scale making and overhaul are specialized work, requiring long experience and special tools. Such reconditioning, if undertaken at a scale location, is likely to lead to disastrous errors. The parts requiring work should be removed and transported to the tool shop.

In closing, I cannot emphasize too strongly that it pays to keep scales in good condition. Weighing errors, spoiled or inferior batches of concrete—these are expensive prices to pay for lack of a little care and foresight. Remember, a scale is a precision instrument. Give it reasonable care and treat it reasonably well, and it will give long, satisfactory service.



● Two weigh batchers, one cement and the other aggregate, are combined in one unit. It may be operated manually, by push button, or automatically.



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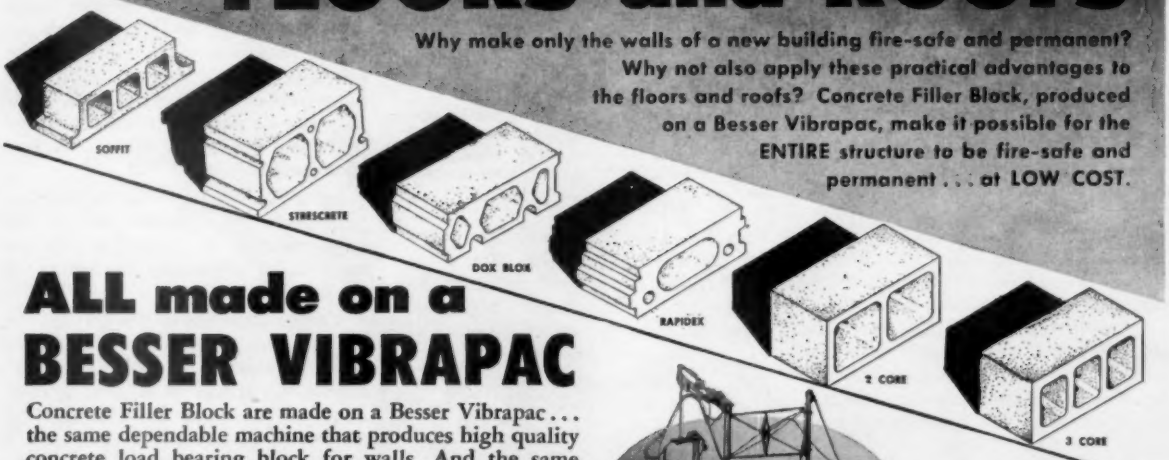

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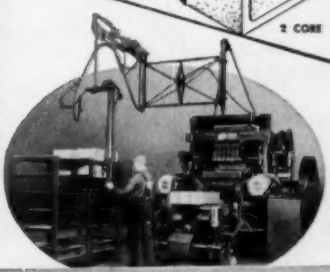

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Curing Concrete Units

By WILLIAM GRANT
Consulting Engineer

First Part of a Continued Article

THE term curing as applied to concrete units may be considered as the period between the molding operation and the time when the units are strong enough to be used.

Hydration or hardening of cement takes place through chemical reaction between the cement and water. If water is not present in sufficient quantity, the hardening reaction is impeded. Sufficient moisture must be present during the entire period after molding until the required strength is attained.

In the early years of block manufacture, the units were usually placed in yard storage where they were subjected to a perfunctory wetting. In most cases, however, the application of the moisture, so necessary for hydration of the cement, was left to chance depending on weather conditions.

Improvements in the methods of curing indicated that if units were subjected to the effects of low pressure steam, or to a system producing a fog of atomized water in a heated atmosphere, satisfactory compressive strengths were obtained. From these beginnings the present day methods of accelerated curing have been developed. The ever-increasing demand for masonry units has resulted in the development of accelerated curing to its present state of efficiency.

Though with present day forms of curing, a product capable of meeting strength specification requirements can be produced and cured within a period of twenty-four hours, units should be yard-stored for further curing and drying to minimize cracking when they are placed in the wall.

Irrespective of the care exercised in the selection of aggregates, the amount of cement used, and the processing of these materials, the resultant product may not reach its maximum strength because of improper curing of the units. Since plants differ in kiln shape, size, boiler capacity, block per rack and per kiln, production rate, type of cement and aggregate, along with other details incidental to live steam curing, the subject must, therefore, be treated in a very general manner.

With all methods of curing block three essential factors are involved, namely, time, temperature and moisture. In selecting the method of curing, the important consideration is to maintain the concrete in a moist condition until the cement has properly hydrated or hardened.

Masonry units may be cured in one of several ways, such as by natural curing, heat with fog spray, high pressure steam, or high temperature steam.

• NATURAL CURING—Natural curing means the curing that takes place when units are subjected to the atmospheric conditions existing at the time the units are made without special heating or wetting.

If natural curing is used, weather conditions during different seasons and the section of the country in which the plant is located must be considered. In any case, provision should be made for an enclosed storage room in which units may be placed for a part of their curing time, or until they attain sufficient hardness.

In those localities of the country where a warm moist atmosphere prevails, along with occasional showers, and where temperatures do not drop much below 50 degrees Fahrenheit, units, after they have attained sufficient strength, may be yarded. However, they should be protected from drying winds and sun, since these tend to remove moisture.

Outdoor curing in southern climates eliminates the necessity for steam curing and will prove just as effective provided the units are kept continuously wet either by hose or sprinkler, if necessary, for at least forty-eight hours after they are made. Care must be taken to see that all units in the pile are thoroughly wetted.

In colder localities, freshly made units should not be placed in an unheated enclosure, since either frost or excessive cold prevents the proper hardening of the concrete. Cold drafts may also be harmful, since these tend to dry out the surface of the units and produce brittleness.

Under such conditions an addition of from two to three per cent of calcium chloride by weight of the cement helps accelerate hardening of the concrete.

Frozen aggregates should not be used until thoroughly defrosted. Where provisions for heating the preliminary curing room are lacking, heat may be supplied to the units by means of salamanders over which pans of water are set. The objective of this is to produce a warm, moisture-laden atmosphere while hydration is taking place. Rapid drying out of the units, no matter how induced, should be avoided.

• HEAT WITH FOG SPRAY—With this form of curing the heat and moisture necessary to maintain a

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Here is the ultimate in block making equipment . . . the Besser Unitized Vibrapac with Batch Mixer, Skip Loader and Power Off-bearing Hoist . . . *all on one floor.* Steps up block production . . . saves manpower. Produces three 8 x 8 x 16 block (or equivalent) at a time, on one Plain Pallet, with capacity up to 10,000 block per day. Overall dimensions of unitized machine is 37′ long, 14′3″ wide and 23′6″ high.

If you want to increase production of high quality block, consider this winning combination. Ask your nearby Besser representative for literature.

BESSER COMPANY ALPENA, MICHIGAN, U. S. A.

proper kiln atmosphere may be produced as follows:

I. By passing low pressure steam through a series of coils of pipe placed adjacent to the walls and slightly above the floor level of the kiln.

II. By burning gas in a specially designed burner located within the kiln and to which a blower is attached. By this method all of the heat of combustion can be used to raise the temperature of the kiln. The products of combustion are carbon dioxide, water vapor, possibly some carbon monoxide, and nitrogen, all of which become a part of the kiln atmosphere. In the process of complete combustion, oxygen of the air combines with the carbon of the fuel to form carbon dioxide. The maximum amount of carbon dioxide by volume varies according to the type of fuel used, for natural gas 12 percent, fuel oil 15.5 percent and bituminous coal 18.2 percent.

When carbon dioxide from the combustion of the fuel becomes a part of the kiln atmosphere, and when this atmosphere becomes highly saturated with carbon dioxide, the results, under certain conditions, may prove detrimental to the concrete units.

Carbonation of the concrete is a chemical reaction in which carbon dioxide combines with the calcium hydroxide freed from the calcium silicates and aluminates in the cement during hydration. One of the resulting compounds formed is calcium carbonate.

The moisture necessary to keep the kiln atmosphere in a saturated condition is produced by forcing water through a spray nozzle. The nozzle is located in front of the burner and converts the water into a fine fog. Where city water pressure is not available, or is too low to produce a fog, air pressure may be used to force the water through the nozzle.

Since it is difficult to obtain the maximum (100 per cent) humidity by this method of supplying moisture, every precaution should be taken to insure that the humidity of the kiln atmosphere is maintained at a point as high as possible. When there is a deficiency of moisture, the water in the pores of the units is absorbed into the kiln atmosphere, resulting in drying out the surface of the units.

If the surface of the units becomes dry, due to low humidity content of the kiln atmosphere, the rate of carbonation is accelerated. In a moisture saturated condition, a skin of calcium carbonate is formed on the wet surface of the block, which prevents penetration by carbon dioxide. Either one of these conditions can be detrimental or beneficial to the units.

If carbonation occurs before the cement hydration compounds are formed, and if the cement gel is in an unstable condition, the results will be detrimental. While the strength of the block may be sufficiently high, the surface and corners being brittle may cause excessive breakage in handling the units.

If carbonation occurs following hydration, and the gel is in a stable condition, the results can be beneficial. The units will have a tough surface and possess good strength qualities. In view of the effects of carbonation during hydration of the cement, caution should be observed in selecting the curing method developing the heat and moisture.

Carbon monoxide gas may be produced, under certain conditions, during combustion of the fuel. This gas is detrimental to the health of anyone subjected to its effects. According to the U. S. Bureau of Industrial Hygiene, a concentration of 100 parts per million of carbon monoxide may prove lethal. It is therefore very important that the kiln be aired out before allowing anyone to enter.

• **Autoclave Curing**—The principles of high-pressure, high-temperature steam are involved in autoclaving. Manufacturers using this method for curing units claim the following advantages:

I. Units are more stable and less subject to the effects of expansion and contraction due to moisture gain or loss than those produced by other methods.

II. High pressure curing bleaches the natural color of the products to an almost white color.

III. Danger from various disruptive forces due to impurities in the aggregate are eliminated during the curing period.

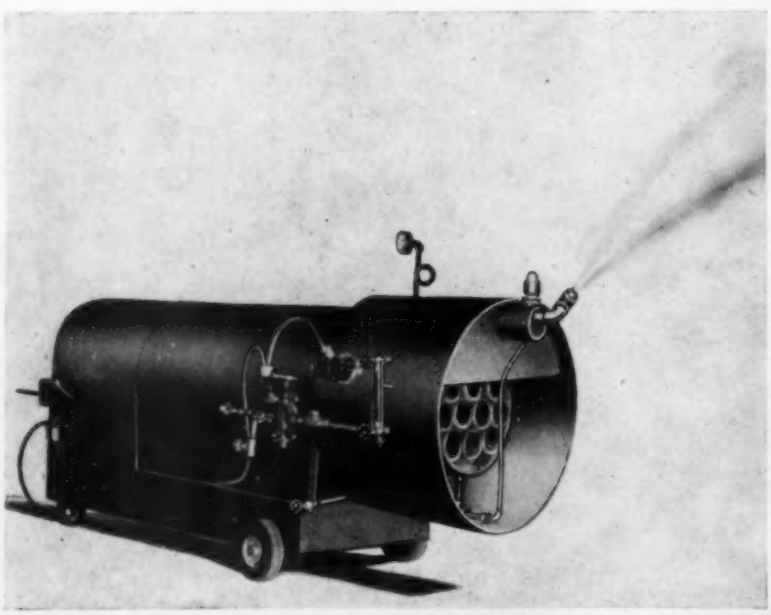
IV. Substantially drier products are obtained upon removal from the kiln, compared with the moist cured or air cured product.

V. Greater economy of curing, since leaner mixes for the same strength may be used.

VI. Smaller yard space requirements, since units can be delivered in a shorter time.

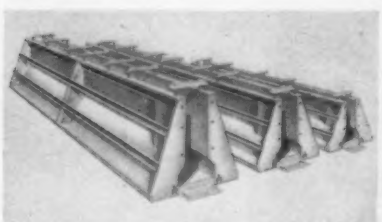
Autoclave curing kilns are cylindrical steel drums capable of withstanding high pressures. The cylinders vary from 6 feet 6 inches to over 8 feet in diameter and from 50 to over 100 feet in length. They may have access door openings at one or both ends. They are fitted with pressure tight doors, either of the quick locking type or bolted type.

The curing cycle is from 12 to 16 hours, with 8 hours steaming at max-



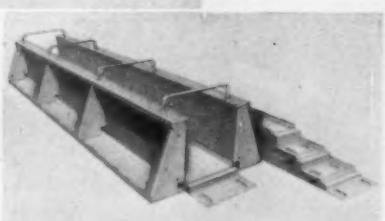
• Portable steam-producing unit jets steam directly into the kiln. By this method, little of the steam's heat is lost to the atmosphere.

Just issued! This catalog describes the most complete line of steel forms available. Forms are fully illustrated and described, specifications are complete to enable the producer or engineer to accurately plan for efficient production. Many leading prestressing firms use WATCO forms to produce a great variety of uniformly accurate concrete sections. Precise fabrication and prealignment prior to shipment assure perfect fit when installed. Write for your copy of this new WATCO catalog. Use it to plan your plant for superior precast prestressed concrete production.



WATCO forms are available to produce Type I, II, III, IV, AASHO-PCI bridge girders, Florida Type A, B, C, D, and most other State Road Board designs.

Adjustable square and octagonal piling forms are offered to produce precast or prestressed piles in the 12" to 24" range.



PLANT CITY
Welding & Tank Company
P. O. BOX 1308 • PLANT CITY
FLORIDA

RESEARCH DATA RELEASED BY DUR-O-WAL

Independent Study Now Available to Industry

In an effort to obtain pertinent information as to how joint reinforcing actually affects the strength of masonry construction, Dur-O-waL sponsored a program of research carried on by the Research Foundation of the University of Toledo in 1956. The study was designed to provide data on the following items:

1. The relative lateral strength of walls constructed with various types and amounts of reinforcing.

2. The relative effectiveness of various types and amounts of reinforcing used in walls laid up with mortars of widely varying strengths.

3. The effect of deformation in the side rods on the bond in both weak and strong mortars.

4. The effect on bond of the joints formed by the side rods and cross rods.

5. The effect of deforming on the strength of the side rods.

A total of 39 walls, 9'-4" x 4' were built and tested. More than two dozen tension tests were made on plain and deformed wires; 80 pull-out tests were made to determine bond characteristics.

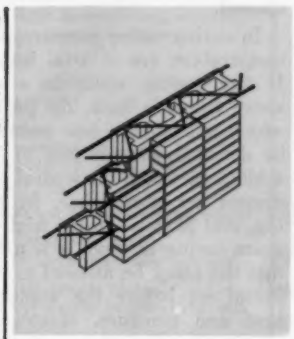
Guide for Comparison

Three points of importance in comparing quality —

1. Weight of material
   a. Comparison of actual weight per 1000 lineal feet.
   b. Flexural strength in relation to weight of steel in wall.
2. Deformation
   a. Report of tests
3. Mortar Locks
   a. Report of comparative tests

Dur-O-waL Distribution

More than 8,000 dealers stock Dur-O-waL, which is distributed in key markets throughout the United States. It is readily available in your area now.



Widening Design Horizons

By scientifically combining steel with concrete, architects are provided with new freedom of design and new economy of construction. Dur-O-waL is designed to fill a basic need for an economical, fabricated reinforcing member for masonry walls. You are invited to send for your copy of the research findings to learn how this truss design member provides superior lateral and horizontal reinforcing.

Adequate Manufacturing Facilities

Dur-O-waL is manufactured by the Dur-O-waL Division, Cedar Rapids Block Company, **Cedar Rapids, Iowa;** Dur-O-waL Products, Inc., Box 628, **Syracuse, N.Y.;** Dur-O-waL of Illinois, 119 N. River Street, **Aurora, Illinois;** Dur-O-waL Products of Alabama, Inc., Box 5446, **Birmingham, Alabama;** Dur-O-waL Products, Inc, 4500 E. Lombard St., **Baltimore, Md.;** Dur-O-waL Div., Frontier Mfg. Co., Box 49, **Phoenix, Ariz.;** and Dur-O-waL, Inc., 165 Utah St., **Toledo, Ohio.**

Advertisement

imum temperature and pressure. A heating up period of 3 to 5 hours is required to bring the cylinder and contents up to maximum temperature, and a short period of time should be allowed for reducing pressure and cooling the cylinder before it is opened.

In curing under pressure, time and temperature are of vital importance. If the curing cycle is accelerated above the safe limit, the purpose for which autoclaving was installed may be defeated, namely that of securing a block in which the hydration of the cement gel is complete. In autoclaving, and likewise in the high temperature curing method, it is mandatory that the block be allowed to attain its initial set before the application of heat and moisture. If steam under pressure is allowed to enter the autoclave too soon, or the pressure is brought up too fast, thermal shock may result. This in turn can cause crazing or cracking of the surface, distortion of shape, or the production of brittle units.

Steam is introduced into the cylinder at a temperature of approximately 350 degrees Fahrenheit, with a corresponding saturated steam pressure of approximately 125 pounds per square inch.

Block cured by the autoclave method reach a high strength quickly, and generally can be used at the end of 24 hours. However, the cost and installation of cylinders and the necessary boiler equipment, up to the present time, have been considered expensive, in comparison with low pressure equipment.

The manufacturer thinking in terms of producing a unit of comparatively low moisture content, should consider the cost of high-pressure steam curing as compared with covered storage or special drying rooms for obtaining a unit of low moisture content.

Autoclave curing is done under pressures of 120 to 150 pounds per square inch or in a temperature range of 350 to 385 degrees Fahrenheit. Under these conditions of temperature and pressure, the rate of chemical reaction of the cement differs widely from that in a temperature range of 140 to 160 degrees Fahrenheit.

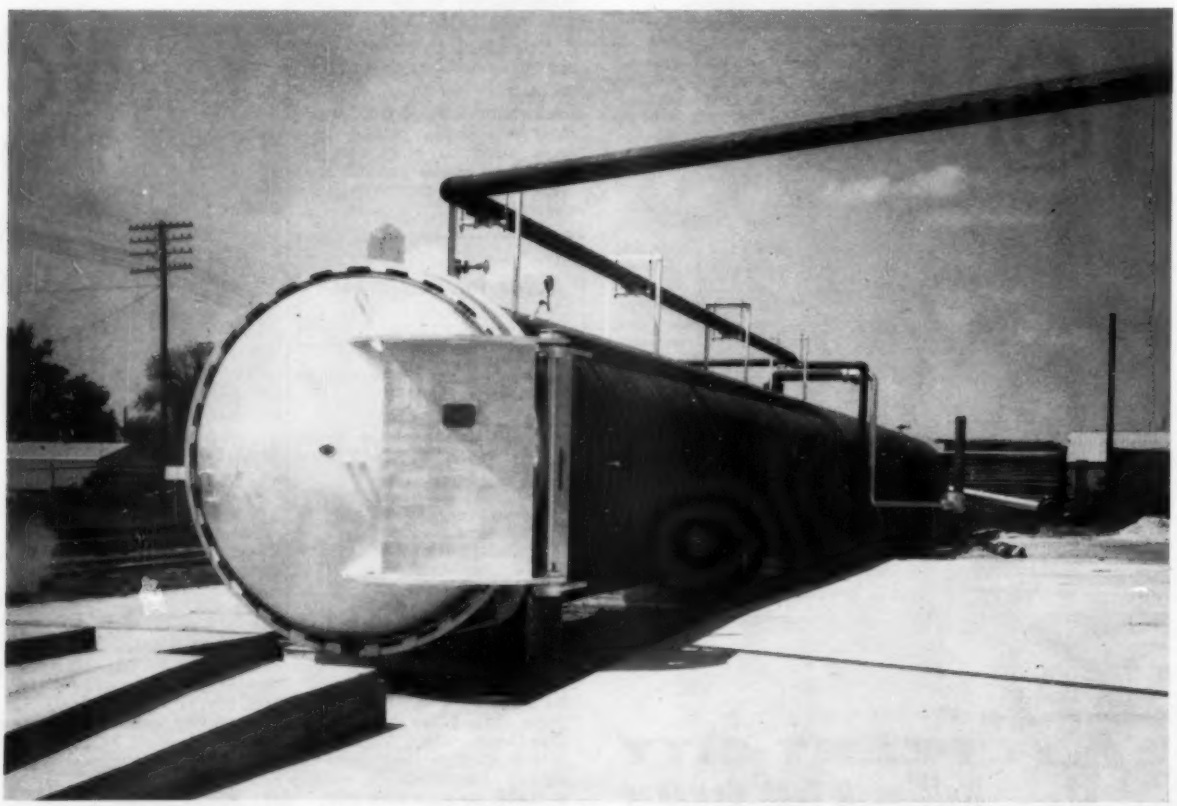
The temperature in the autoclave is a function of the pressure in the vessel only if the vessel has been completely purged of air. The relationship between temperature and pressure is not a direct function; that is, if the pressure of steam is doubled, the temperature is not doubled but only increased slightly.

For example, consider the following table showing the properties of dry saturated steam only:

Absolute Pressure	Corresponding Temperature
0 lbs.	212.00 deg. F.
20 "	227.96 "
40 "	267.25 "
60 "	292.71 "
80 "	312.03 "
100 "	327.81 "
120 "	341.25 "
140 "	353.02 "

These relationships do not hold true of wet or superheated steam or with air in the vessel. With any of these conditions existing, an entirely different set of thermodynamic properties may be present within the vessel.

(*Continued Next Month*)



● Recently installed autoclave at the Stewart-Nattinger plant in Springfield, Missouri, has an 8½-foot diameter and is 108 feet long. Capacity is 6,500, 8x8x16 equivalents. Steam is furnished by two steam generators.

Forrer's XL-100

Powdered

Concrete Plasticizer

does a better job . . . yet costs less!

Costs only ¼c per bag of cement

Cut your plasticizer costs to the bone with XL-100 dry powder. It weighs less — goes farther and does a better job. New process brings you a plasticizer that acts faster, takes 1/3 the amount (by weight) and does a superior job. Concrete blocks are shades whiter, denser and outside surfaces have smoother texture. Increase contractor, builder satisfaction — deliver a better block for less than 1/4c per bag of cement. Investigate Forrer's XL-100 today!

COMPARE!
SEE THE AMAZING DIFFERENCE!

Forrer's XL-100 is a dry hydrated powder with wetting and dispersing agents. It's easy to use and economical too — costs but ¼¢ per bag.

Send for FREE Trial Sample Today!

FORRER'S, 2225 N. Humboldt Avenue, Milwaukee 12, Wis.

FORRER'S
STAR PRODUCTS FOR MASONRY

- ★ **X-L 100.** Powdered concrete plasticizer
- ★ **Kleen-Mix.** Eliminates "build-up" on hoppers and mixers
- ★ **Hydro-check.** The perfect fast-setting, waterproofing cement additive
- ★ **De-Solv-It.** Dissolves concrete — without harming metal
- ★ **Accelerator.** Speeds setting concrete — down to 15° F
- ★ **For-Air.** Concentrated air entraining agent
- ★ **Ramsey Moisture Probe.** Measures sand moisture content
- ★ **Ramsey Moisture Meter.** Regulates water in concrete mix automatically
- ★ **Kover-Kote.** Transparent protective film for ready mix trucks.

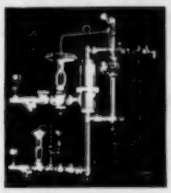
Forrer's
PRODUCTS FOR MASONRY
SINCE 1926

...it's easy to pour concrete in sub-zero weather...

..... when you use a

Pick

INSTANTANEOUS
STEAM INJECTION
WATER HEATER



PICK MANUFACTURING CO. • WEST BEND, WIS.

NEW LITERATURE

SHADOWAL ATTACHMENTS — *Columbia Machine*, 107 South Grand, Vancouver, Washington, has prepared a brochure on Shadowal units produced from their molds.

BRIDGE CONCRETING—Problems and solutions of bridge concreting are the theme of the MBR-P-11, a 16-page reporter just published by *The Master Builders Company*, 7016 Euclid Avenue, Cleveland 3, Ohio.

Case histories of bridges are covered in five stories illustrated by accompanying photographs. They cover concreting of piers and bridge decks for highway and railway bridges in hot and cold weather, and include discussions of placing and finishing problems and of use of light weight aggregate.

For Sale
HOT WATER
500 to 10,000 gallons per hour
Temperatures from 90° to 210° F.
do you need
Viking Superior Unit . . . HERE
HOT WATER?
Means ALL WINTER Pouring HERE . . . . .
Boston, Mass.— Wellesley 5-3529
Buffalo, N.Y.— Parkside 0623
Brooklyn, N.Y.—Shore Road 8-4330
Chattanooga, Tenn.—Tucker 6-1277
Chicago, Ill.—Walbrook 5-9702
Grand Rapids, Mich.—Glendale 4-0879
Greensboro, N.C.—2-6420
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get the facts . . . . . PHONE . . . . WRITE
VIKING SUPERIOR CORP.
Manufacturers of Water Heating Equipment
Tele.: Shore Road — 84330
731-65th Street
Bklyn. 20, N.Y.

LIFT TRUCKS—Gasoline or LPG-powered fork lift trucks are described in two new bulletins available from the *Baker-Raulang Company*, 1250 West 80th Street, Cleveland 2, Ohio. Bulletin 1348A covers the Model FG-60, and Bulletin 1395 covers the Model FG-50.

CALCIUM CHLORIDE — Two manuals are available from the *Calcium Chloride Institute*, 909 Ring Building, Washington 6, D. C. Manual CM-1 contains specific information on the major effects of calcium chloride in concrete. Manual HM-1 describes how to handle, store, and apply calcium chloride, with a section on winter maintenance.

CAR SHAKER—Features of the Allis-Chalmers car shaker are described in bulletin 07B221B released by *Allis-Chalmers Manufacturing Company*, Milwaukee 1, Wisconsin.

FORK TRUCK—Specifications, operating characteristics and design features of the Clarklift Y-200 fork truck of 20,000 pounds capacity are contained in a six-page brochure available from Industrial Truck Division, *Clark Equipment Company*, Battle Creek, Michigan.

MASONRY SAWS—Descriptive brochures are available on the complete line of *Clipper* masonry saws. Bulletin 2019 illustrates features of the Supermatic, and the Select-A-Notch brochure is numbered 2021. They are available from Clipper Manufacturing Company, Suite 133, 2800 Warwick, Kansas City 8, Missouri.

INDUSTRIAL TIRES—A 36-page illustrated guide book published by *B. F. Goodrich Tire Company*, Akron, Ohio, explains all phases of industrial tire use. In addition to specifications of industrial tires, the book describes the complete B. F. Goodrich line, the use of each type, variations in pneumatic tire capacities at various speeds, wheel and caster combinations, latest available truck manufacturers' tire specifications, and how to change steel wheels to rubber-tired wheels.

RUBBER DUCTS—Uses of rubber formers in the formation of concrete construction joints, and for embedding cable in concrete, are explained in "Rubber Developments," available from the *Natural Rubber Bureau*, 1631 K Street, N. W., Washington 6, D. C.

NEWS *from the Manufacturer*

METHODS
MATERIALS
EQUIPMENT
TOOLS

New Aggregate Plants Are Added to Blaw-Knox Line

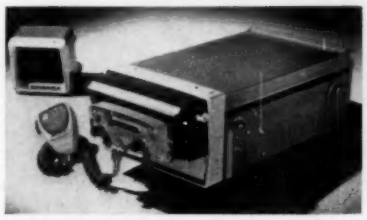
Two new aggregate plants recently introduced by the Construction Equipment Division of the Blaw-Knox Company, Matton, Illinois, are now available.

The P-3150 GAC plant has three equal compartments with each rated at 50 tons capacity, or 33 cubic yards heaped. The P-5150 GAC is a five compartment plant with four bins for aggregates and one for cement. The cement compartment is rated at 225 barrels while the aggregate capacity is 28 tons for each compartment.

Motorola Two-Way Radio Has Transistorized Power

"T-Power" radiophones, a new line of two-way radio units manufactured by Motorola Incorporated, incorporates a transistorized switching circuit in place of the conventional vibrator. In this way, the "hash" produced by the vibrator has been eliminated.

Black finned radiators known as heat sinks have been added to the radio units. The heat sinks conduct heat away from the germanium power transistors and permit them to operate at high ambient temperature



while carrying heavy current loads.

The unit is rated at 20 and 25 watts power output and operates in the 25-50 or 144-174 megacycle bands.

More information is available from Motorola Incorporated, Technical Information Center, Communications and Electronics Division, 4501 West Augusta Boulevard, Chicago 51, Illinois.

Mount Nine-Yard Bodies by Adding Fourth Axle

Two of Warner Company's 26 twin front and rear-axle ready mixed trucks deliver concrete to a paving project.

By adding another axle in front, and spreading the payload over two front axles, as well as the two in the rear, the Warner Company, headquartered in Philadelphia, increased the hauling capacity of these trucks by about 30 per cent. Instead of 6½-yard bodies, these trucks now mount 9-cubic yard bodies.

These are special GMC trucks. Both front axles are controlled from a single steering gear assembly, and both work in unison. More information can be obtained from GMC Truck & Coach Division, Pontiac, Michigan.

Have Block Machine Parts for Producing Shadowal

Attachments necessary for the manufacture of Shadowal units are now available from many block manufacturers, a number of whom helped develop this equipment in co-operation with the National Concrete Masonry Association. These new parts are geared to fit existing machines.

Companies who have notified us that they are manufacturing the attachments are:

Bergen Machine and Tool Company, Incorporated, 189 Franklin Avenue, Nutley, New Jersey.

Besser Company, Alpena, Michigan.

Columbia Machine, 107 South Grand, Vancouver, Washington.

GOCORP, 401 Grace Street, Adrian, Michigan.

The Kent Machine Company, Division of the Lamson and Sessions Company, Cuyahoga Falls, Ohio.

The Lithibar Company, Holland, Michigan.

Stearns Manufacturing Company, Adrian, Michigan.

Concrete Form Coating Dries into a Hard Finish

A new coating for concrete forms is announced by Industrial Synthetics Corporation, 2000 West Walnut Street, Chicago, Illinois.

FORMGARD coating is a reformalization of Eziform which has the viscosity of water. It is applied by hand or mechanical spray, or with brush or mop. It penetrates into the pores of the wood and surrounds the fibres, coating them and drying to a hard finish which is impervious to water, oil, or the chemical action of wet concrete.

The liquid comes in concentrated form to be mixed with four parts of regular furnace fuel oil. Thus diluted, it dries on new or cleaned wooden surfaces in about three minutes. Five to ten pours, minimum,

are guaranteed before recoating is necessary.

FORMGARD can be used on metal or plastic forms, also, though the drying time is longer and a maximum of five to eight pours is obtained. The coating is not discolored or greasy and is not transferred to the dried concrete face.

Franchises Available for Making Concrete Veneer

A precast stone-like veneer, closely duplicating the appearance of quarried stone, and made possible through the use of specially designed plastic molds, has been announced by Roman Stone Corporation, 2027 W. Division Street, Chicago, Illinois.

Franchises authorizing production of the concrete veneer are available for a number of areas. Roman Stone Corporation sells the molds and some of the ingredients to make the cast stone.

Designed in ledge-rock pattern, the stone can be manufactured in 72 tested pastel shades and in nine different square or rectangular shapes.

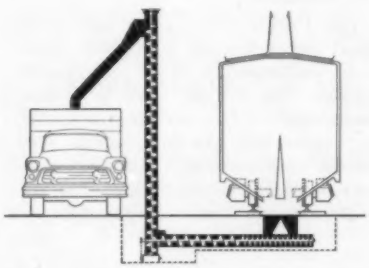
The precast stone, which is made from types of portland cement, is cured in lightweight vinyl plastic molds, which permits them to be stacked as high as 10 feet, thus utilizing floor space.

The flexible molds require no lubricants; and despite the flexing involved in stripping the molds from the cured stone, their useful life is almost limitless, according to the manufacturer. The plastic material also remains unaffected by water and chemicals employed in curing the stone.

Screw Elevator Removes Cement from Hopper Cars

At a railroad spur near the Dallas-Fort Worth Turnpike, a 12-inch-diameter "Fort Worth" screw elevator has been used in turnpike construction to move cement from hopper cars to trucks. According to the manufacturer, Fort Worth Steel and Machinery Company of Fort Worth, Texas, the elevator shows advantages of capacity and portability in meeting cement-handling needs of producers of ready mix concrete and concrete products.

In discharging 150 tons of cement per hour the elevator loads one 40-barrel truck every three minutes. The unit, with 18-foot lift, is fed by a



12-inch screw conveyor extending beneath the rail spur.

A permanent foundation for the installation is not needed. In three hours three men can dismantle the screw elevator prior to transporting it to a new location.

The elevator and feeder conveyor may be driven from any convenient power source.

Vibrator Works Concrete In Hard-to-Reach Places

Model 11A, small diameter internal concrete vibrator, is announced by Viber Company, 726 South Flower Street, Burbank, California.

The 10½-inch head has a diameter of 1-5/16 inches, making possible consolidation of low slump concrete in hard-to-reach areas in prestressing forms.

Weight of the model 11A with a 14-inch, interchangeable, flexible shaft is 16 pounds. The shaft is also available in 24-inch lengths.

IT'S Sound-Absorbing AS WELL AS...

★ Lightweight
★ Durable
★ Firesafe
★ Attractive
★ Strong
★ Nailable
★ Of High Thermal Insulation Value
★ An Excellent Plaster Bond

CELOCRETE
LIGHTWEIGHT AGGREGATE

No wonder Celocrete Lightweight Aggregate is being used by more and more leading builders and manufacturers of concrete products. Its big construction advantages and economies make Celocrete the preferred aggregate for masonry units, pre-cast building panels, soffit tile, monolithic floors and roof fill, and many other uses.

Celocrete Lightweight Aggregate is made from expanded slag by a process licensed *only* by the Celotex Corporation. This exclusive method honeycombs every particle of Celocrete aggregate with tiny air cells—resulting in lightweight plus *built-in* insulation and sound-absorption value. For complete information write The Celotex Corporation, 120 S. LaSalle Street, Chicago 3, Illinois.

Another Famous CELOTEX *Product*

CELOCRETE
REG. U. S. PAT. OFF.
LIGHTWEIGHT AGGREGATE

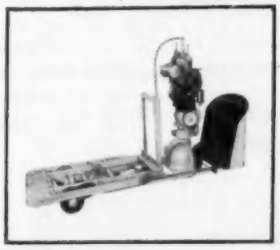
The Celotex Corporation, 120 S. LaSalle Street, Chicago 3, Illinois

TRACTION

for HEAVY BLOCK LOADS with truck-man Y-60

THAT'S RIGHT!

Truck-Man's 6,000 lb. capacity Y-60 with duals will move quickly and easily across a rough unpaved yard with a full 3 ton cube of blocks.



Ask about the Truck-Man Model DHP 4500 lb. capacity, low lift truck—the lowest cost mechanical handling you can buy from block machine to kiln to cubing area. *NOW* with *REWIND STARTER STANDARD* and optional LP Gas.

- GIANT 12-ply Hard Rock Lug drive wheel tires and 10-ply pneumatics on rear furnish the traction—Big, 6-cylinder, 73 HP Engine (gasoline or LP gas) furnishes the reserve power to bull thru mud or over humps and ruts.
- TWO WIDESPREAD REAR WHEELS eliminate tipping.
- POWER STEERING STANDARD—saves time, cuts fatigue.
- STANDARD or MUILTI-LIFT mast (MUILTI-LIFT with lower down height works great in kilns).
- FASTER—Speeds to 20 MPH, forward or reverse, gets you there and back in a hurry—No need to turn around.
- OPTIONAL attachments to fit your needs—Xtra wide drive axle at no extra cost—Single or dual drive wheels—Side shifter—Overhead guard—Lights—Many others.
- OVERSIZED tires, more power, greater underclearance, full rated capacity with side shifter—make this Truck-Man THE truck for block plants.

Write today for complete information on how to reduce your block handling costs.

truck-man
DIV. OF THE KNICKERBOCKER CO.
570 LIBERTY ST., JACKSON, MICHIGAN

IT'S BRAND NEW

Cleveland's RC-5 — a new quiet, light-duty electric vibrator

- IT'S QUIET
- DEVELOPS 275 LBS. OF CENTRIFUGAL FORCE
- ALL ELECTRIC
- OPERATES ON LESS THAN .5 AMP. ON 220 V.

Compact design for light duty on bins and hoppers, chutes, tubes, and other storage facilities for bulk materials. Prevents bridging, plugging and arching — eliminates processing delays.

Write for detailed information and prices.

Air or Electric

Portable or Permanent

Silent or Standard

Bin Stuck Lately?

THE CLEVELAND VIBRATOR COMPANY

2708 Clinton Ave. • Cleveland 13, Ohio

Belt and Chain Unloader Added to Fairfield Line

Materials-handling capacity up to 185 tons per hour is a feature of Model 109 Car Unloader announced by The Fairfield Engineering Company at Marion, Ohio.

The combination belt and chain unit can be used as an over-the-rail type unloader or it can be used in a standard pit, making it adaptable to ready mix operations for unloading

materials onto stock-piling conveyors.

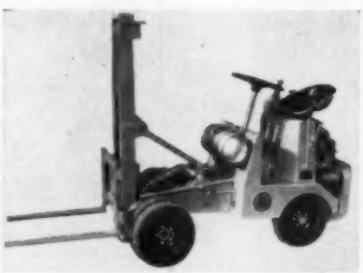
The belt is 24 inches wide with 1¾-inch × ½-inch steel channel belt cleats. Chain covers with rubber sealing strips are provided for the full length of the unit.

Car Unloader 109 is 20 feet, 10½ inches long by 33¾ inches wide, and can be powered with either a five horsepower electric motor or an 11 horsepower gasoline engine.

Kwik-Mix Introduces LP-Gas Engines on Moto-Bug

"Moto-Bug" materials handling tool by Kwik-Mix Company, division of Koehring Company, Port Washington, Wisconsin, is now equipped with LP-Gas engines. According to the manufacturer, use of this equipment prolongs engine life and requires less maintenance.

The two "Moto-Bug" models are



constructed for use as flat bed, hopper, or fork lift carrier. Both model S-10, with fork-lift capacity of 1000 pounds, and model R-15, with fork-lift capacity of 1500 pounds, are powered with LP-Gas.

Tungsten Carbide Blade Added to Champion Line

Champion Manufacturing Company, 2028 Washington Avenue, St. Louis 3, Missouri, has developed the tungsten carbide blade M-48 for cutting concrete block.

Felker's New Masonry Saw Has Front-End Control

A masonry saw that gives the operator front-end control of machine functions and adjustments has been developed by Felker Manufacturing Company, 1128 Border Avenue, Torrance, California.

The arbor can be raised or lowered to any column slot by one man without moving from the operating position. According to the manufacturer, this is simplified by a handle on the front of the arbor and by the ability to balance motor and arbor weight on the rear connecting bar during changes, thus relieving strain.

A new front lever control releases the connection between arbor and foot pedal. When correct angle is reached, a spring loaded pin re-engages the connecting bar. Arbor may be locked against vertical travel when diamond blade is cutting. A blade depth control is furnished to stop blade at any desired depth of cut. Also, to increase blade power, a non-slip timing belt is incorporated which eliminates belt slippage. More information is available from the manufacturer.

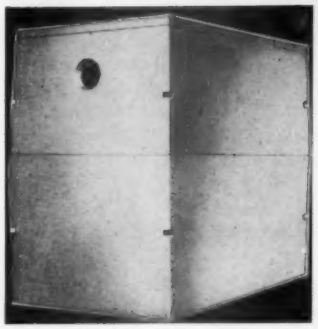
Fairfield Announces New Line of Storage Bins

A new line of elevated circular storage bins of 30 to 200 tons capacity, fitted with gates for discharge into trucks, has been announced by The Fairfield Engineering Company of Marion, Ohio.

The new CB series of Fairfield bins are from 12 to 20 feet in diameter, have drive-through widths of 12 feet 6 inches to 20 feet, and are mounted on eight-foot legs resting on concrete piers. Larger sizes are available on special order.

Single-quadrant manually operated gates controlled from ground level are standard. Double-quadrant air-operated gates are optional.

NORWALK APPROVED SEPTIC TANK MOLDS



IN A SELECTION OF MODELS ENGINEERED TO MEET YOUR SPECIFIC HANDLING PROBLEMS

All styles meet the specifications of Federal, State and Municipal regulations

All NORWALK tanks are available in 500 to 1250 gallon capacities.

- **THE TWO PIECE TANK with tongue and groove seal (illustrated)**
- **THE ONE PIECE TANK with slab top**
- **THE DEEP TOP TANK with air space cover**

Distribution box molds and grease trap molds.

Build approved septic tanks quicker and at lower cost with NORWALK equipment. Rugged, all steel construction, properly reinforced to insure a good, rigid mold that will give many years of profitable production.

Write for detailed information

THE NORWALK VAULT CO.

Dept. AB • Norwalk, Ohio

You can make concrete water repellent before you pour so why use time-consuming after-drying coatings? Simply add Horn Hydratite® to the mix. It creates internal chemical changes—lines the pores—resulting in water repellency and resistance to moisture penetration. It also minimizes the danger of freezing and subsequent cracking or spalling.

Horn Hydratite can be added to concrete, stucco and cement plaster mixes. It is available in either powder or liquid, both of which are equally effective in forming an internal barrier against water penetration.

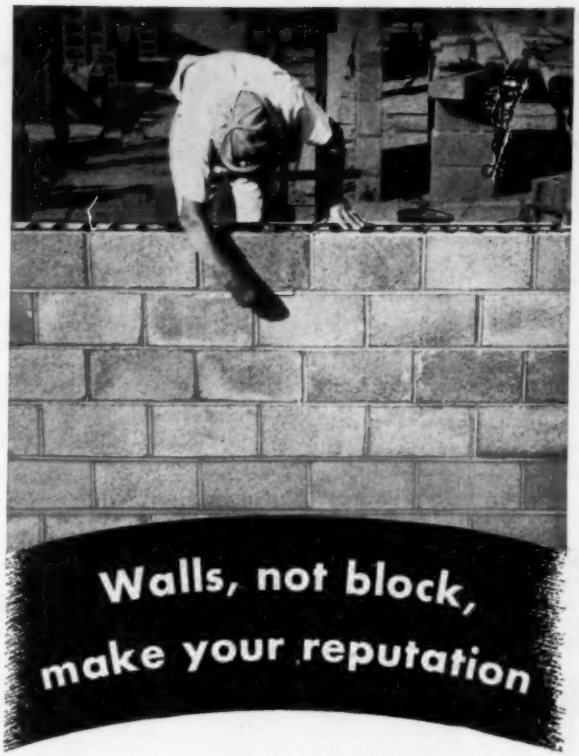
Like to know more about the Hydratites? For details; Write: Dept. H55-1010.

A. C. Horn Companies

SUBSIDIARIES & DIVISIONS

Sun Chemical Corporation

10th Street & 44th Avenue, Long Island City 1, N. Y.



You *make* concrete block, but is that what you *sell?* Is that what the ultimate customer buys when he purchases your product to build a house, a store, office, garage or factory?

No. He buys walls. He judges you and your product on the basis of how it performs as a wall—after the units have been laid. That's why your reputation depends on how well those walls serve, how well satisfied the customer is.

The first requirement for quality walls, of course, is quality block. That means complying with ASTM and Federal specifications for moisture content, strength and water absorption.

Yet quality block alone will not assure walls that give good performances. Quality construction is necessary too. For that reason farsighted concrete masonry manufacturers recommend only those contractors who can be depended on for quality concrete masonry construction.

In addition they make frequent inspections of construction on jobs where their units are being used. They know that quality walls are the best salesmen for additional jobs, the best insurance for continued success and future business.

PORTLAND CEMENT ASSOCIATION

33 West Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work

Dodson's Digest

How to extend the concreting season

I left my car at the garage for repairs last week. When they phoned to tell me it was ready, I jumped in a cab to go and pick it up. I decided to stop for a moment to see Jim Rogers, because I was going right past his office.

Jim has only been a highway paving contractor since last June, and I just wanted to see how he was doing. I found him gazing mournfully at a calendar.

"What's the matter, Jim?" I asked. "Not enough days in the week?"

"I was just cussing the fact that our roadbuilding season is too short," he replied. "Cold weather is starting to set in, and I'm having trouble getting my concrete to set. Looks like I'm about through for the winter."

"Wait a minute," I said. "It sounds to me like you're not using Calcium Chloride in your concrete."

"No, I'm not," Jim admitted. "But how can Calcium Chloride be of any help?"

"Calcium Chloride gives concrete higher early strength," I explained. "So you get faster hardening. This makes it practical to work in colder weather . . . lets you extend your roadbuilding season at both ends. In many climates, Calcium Chloride permits concreting all year long."

"But costs are high enough now, without adding more!" Jim exclaimed.

"Calcium Chloride *reduces* your costs," I assured him, "because it cuts the all-important time factor. In addition to faster hardening you get increased workability . . . your men can handle the concrete faster. And you know that time is money in the roadbuilding business."

"Time is money in the *cab* business, too, buddy," said a bored voice from the doorway. "In fact, right now it's $10.45 worth, and the meter's still running!"

— L. D. Dodson

P.S. — For more information on how to use Wyandotte Calcium Chloride for better concreting this winter, you'll want to read our folder, "How To Make Better Concrete Products and Ready-Mix." To get your free copy, just drop me a line. *Wyandotte Chemicals Corporation, Wyandotte, Mich. Offices in principal cities.*

Wyandotte CHEMICALS

MICHIGAN ALKALI DIVISION
HEADQUARTERS FOR CALCIUM CHLORIDE

MEN IN MOTION

Noble Company

The Noble Company, Oakland, California, cement-aggregate batching plants manufacturer, has opened a new branch office, 2512 West Mockingbird Lane, Dallas 35, Texas. Mr. Robert L. Baxter, formerly of the company's Los Angeles office will be in charge of the new branch location.

Administrative changes at the Noble Company include: appointment of Robert C. Clark, formerly regional manager, Cleveland office to the post of sales promotion manager, Oakland; Arthur B. Kinley from Pacific Northwest regional manager to regional manager, Cleveland office; and Frank Quinn as Pacific Northwest regional manager, Seattle.

Dewey and Almy

Dewey and Almy Chemical Company Division of W. R. Grace & Company, Cambridge, Massachusetts, announces staff additions to promote WRDA concrete water reducing agent.

Walter Adler, Jr., will assume duties in Cambridge as the new WRDA

W. Adler, Jr.

R. G. Crimm, Jr.

product manager. Sales engineers Ralph G. Crimm, Jr., and Richard G. Allen will handle sales of the product.

Mr. Crimm will promote WRDA in the East from Cambridge. Mr. Allen joins the firm's western division at San Leandro, California.

Worthington Corporation

Ziegler Trailer and Equipment, Incorporated, of North Hollywood, California, formerly known as the Specialized Trailers Company, has been appointed as southern California distributor for Worthington Corporation's line of concrete truck mixers.

Burns & Russell Company

District managers for the Mid-West and Eastern United States have been appointed by The Burns & Russell Company, Baltimore, Maryland, producers of Spectra-Glaze compound. William M. Francis will be Mid-West district manager, with headquarters in St. Louis, Missouri. John E. McDonald is the new Eastern district manager at Baltimore.

Columbia Machine

Two shifts have been made in the national sales department of Columbia Machine, Vancouver, Washington.

Lee J. Murray has been assigned to cover the lower peninsula of Michigan and will continue to serve southern Ontario. His former territory included western New York. Howard Smith, who formerly covered Michigan, will serve Ohio and western New York.

Penn-Dixie Cement Corp.

Robert L. Mitchell has been appointed district sales manager for the metropolitan New York sales district of Penn-Dixie Cement Corporation, according to an announcement by Donald L. Hensley, general sales manager.

The Lith-I-Bar Company

LeRoy Tinsley has been appointed as a representative of The Lithibar Company, Holland, Michigan, for the sale of concrete block and related machinery in the states of Illinois and Missouri. Mr. Tinsley has recently been assistant manager of Marion County Redi-Mix Concrete of Centralia, Illinois.

Bendix Radio Division

Promotions in the Bendix radio division of Bendix Aviation Corporation, Baltimore, Maryland, have been announced.

Gilbert D. Doroff will direct national sales of two-way mobile radio systems to ready mix producers. Frank R. Viafora assumes the post of regional manager in the midwest for the same products.

Beautify and Protect Porous Masonry with ONE COAT AGRASEAL

NEW, WATER-REPELLENT BRUSH COAT SEALS PORES OF CONCRETE AND BEAUTIFIES IN ONLY ONE COAT!

- For exterior or interior use on cinder blocks, light-weight aggregate and concrete blocks.
- Better than two or more coats of ordinary cement coatings.
- Fills all voids. No hair checking. No alligator checking. No powdering.
- No expensive equipment needed. Apply with ordinary scrub brush or short bristle paint brush.
- Easy mixing. No lumps. Quickly soluble.
- Easy brushing. Spreads like butter. Cures fast.
- Comes in white and nine beautiful colors — cream, grey, green, brick red, light buff, sunny yellow, mint green, peach and coral pink.

Write for details!

TAMMS INDUSTRIES CO.

228 N. LA SALLE ST., CHICAGO 1, ILL.

WAL-LOK (MORTAR JOINT REINFORCING) 6 POINTS of SUPERIORITY

1 WAL-LOK is Deformed, Knurled and welded without impairing tensile strength—Assures positive bond for full length of structure.

2 Cross Bars hold WAL-LOK up—for complete bond with mortar all the way around.

3 WAL-LOK is packaged (25 twelve foot sections per bundle) for easy handling, fewer splices, less waste.

4 SuperStandard has 8 ga. side rods—more bonding surface, greater tensile strength than 9 ga. and is the minimum recommended by the National Bureau of Standards.

5 WAL-LOK and only WAL-LOK gives the same bondage per square inch of surface with SuperStandard grade as with the Extra Heavy grade.

6 WAL-LOK is manufactured in one factory—quality control is strictly maintained—immediately available, everywhere through leading distributors and dealers.

WAL-LOK

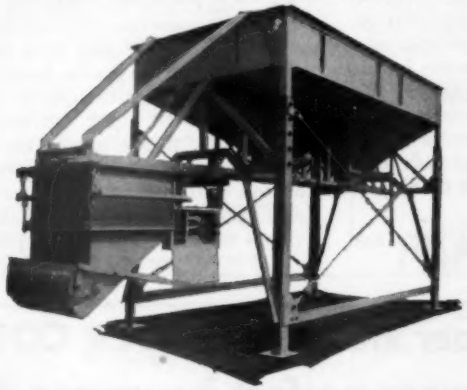
WRITE FOR YOUR COPY OF THIS 4-PAGE FOLDER TODAY ! !

ADRIAN PEERLESS, INC.

1433 E. Michigan • Adrian, Michigan

WINSLOW BINANBATCH

COST SAVING EQUIPMENT—FOR USE WITH 10S-11S-14S-16S MIXERS—AND AT CONCRETE PRODUCTS AND PIPE PLANTS



OVERHEAD BIN CAPACITY 23 OR 40 TONS

Binanbatch can batch and discharge into one or two mixers. Hundreds of users of this equipment can tell of the cost saving advantages of the Binanbatch.

We offer batching bins for ready mix business at low investment

WRITE FOR COMPLETE DETAILS

WINSLOW SCALE COMPANY

P. O. BOX 1198 • TERRE HAUTE, IND.

AURAND

CLEANING TOOLS

ELECTRIC OR PNEUMATIC

Zip away SCALE RUST PAINT

Powerful rotary chipping action completely removes stubborn accumulations from iron, steel, brick, concrete, etc. with less effort. Adjustable depth shoe for controlling depth of cut. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write Dept. 15 for the money-saving facts.

AURAND MFG. & EQUIP. CO.

1210 Ellis St. • Cincinnati 14, Ohio

Sales CLINIC

The Expensive Letter

What's the cost of a letter—the figure runs, according to estimates, somewhere between $.85 and $1.10, depending upon the pay of the individual writing the letter and the number of people who handle it before it is deposited in the box.

But, in any case, the cost of just one or two letters (and this is hardly the number sent out each month by your company) is more money than anyone should throw away needlessly.

But sound selling letters are relatively easy to produce.

As a first step, it might be good to go over the last few letters you have written to customers—take them apart, chopping out needless phrases, difficult words, and words, phrases, and sentences that might mean something when you're speaking face to face with the customer but which sound foolish in a letter.

Next, you could attack the same letters looking for places where they lack interest. Letters, just like all the other reading matter that piles on a businessman's desk, fight for his attention and time. Poor business letters lacking in zing loose a good portion of their value as a selling tool.

Too much of you, the writer, and not enough of him, the reader, is another common fault of many letters. Your test group of letters might stand a little scrutiny for this one-sided approach. And while you're at it you might check to see if they have a quality of warmth and courtesy.

Another touch which could be missing is acceptance. Too often, in the enthusiasm of getting a point across, a letter loses punch because a part of it can only be credited to something other than fact.

The last step, of course, is to rewrite the letters, using the words, sentences, and paragraphs not scratched out.

Spoofing Ads

For a long time it was considered that advertising headlines, such as, "The ready mixed concrete that made Milwaukee famous" or "You can be sure . . . if its Hi-way Block Company" would be selling Schlitz or Westinghouse rather than a product or a company.

But at least one large company doesn't agree with this belief. Recently, ads for Republic Steel Corporation's nuts and bolts have run in connection with such familiar advertising slogans as, "You get a lot to like —heads—threads—spill-proof box" and "I dreamed my husband got a promotion from insisting on Republic bolts and nuts."

It will be interesting to watch and see what other companies take up this gimmick. The nuts and bolts tied up with Marlboro cigarettes and Maiden Form bras is quite far out on the limb. Or is it? One of the first objectives of an ad is to attract attention!

What's Wrong?

The following, taken from *Sales Management*, might work the next time you have an open house.

Appliance dealer in Bellmore, New York, announce a prize of $100 to the first person who could find the single flaw in his remodeled store front. The offer drew more than 3,000 people to his showroom. (One of the hinges on the front door had been put on backwards.)

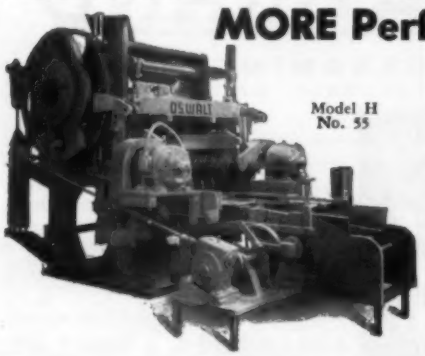
The Subliminal

We're not too certain how "subliminal" advertising can fit into the program of either the block manufacturer or the ready mixed producer. But, still, it is an interesting approach to getting a message across.

"Subliminal" or invisible advertising, as defined by Subliminal Projection Company, Incorporated, is an appeal to the mental level "below the threshold of awareness."

Used in theaters, this form of public persuasion has increased the sale of both popcorn and coca-cola.

Actually, the promoters of this advertising form say they flash the advertisement on the screen for 1/3,000 of a second, long enough so it will register on the mind, but not long enough to intrude at the conscious level. While this short commercial doesn't disturb the film in process, it does plant the seeds of desire for the viewer to go out and buy the product.



Model H
No. 55

MORE Perfect Blocks per Hour at LOWER COST!

— more perfect hours per day

OSWALT Simplified Height and Density Control insure uniform size, texture and compactness of block.

OSWALT Improved Vibration at higher speed-rate boosts production without sacrifice of quality.

OSWALT Front-End Pallet Feeder and Panel Control System maintain smooth, gentle block ejection — more perfect blocks per hour.

PAT. NO. 2,770,346

Send for our new brochure

OSWALT ENGINEERING SERVICE CORP.

1335 Circle Ave., Forest Park, Ill.

Phones: EStebrook 8-4664 (Chicago), FOrest 6-2798 (Suburban)

CLASSIFIED ADS

$10.00 per column inch. Closing date for classified advertising copy is 15th of preceding month.

FOR SALE

Kent Bucket elevator. Never been used. Chain sprockets, buckets, motor belts and automatic feeder. At low price.

W. ALUNNO
342 E. McClellan Flint 3, Mich.
Phone: Su 7-1471

FOR SALE

Lith-I-Block machine L-3. 1953 Model. Can be seen in operation.

HENRI BROCHN
R R #4 Granby, Que. Canada

FOR SALE

FMC 180 block machine, for single phase operation, complete with 4", 6", 8", 12", 12" corner, chimney and manhole molds, racks, pallets and 1 bag mixer, $1950.00. Installing larger equipment. Can be seen in operation at:

CARLSON CONCRETE PRODUCTS CO.
Highway 94 Duluth 3, Minn.
Phone: Ra. 9-8117

FOR SALE

Block plant and pipe plant in town of 7500 in Southwestern New Mexico. $30,000.00 cash.

JOHN L. GRAY
501 S. Slate Deming, N. M.

FOR SALE

Multiplex plain pallet block machine, complete with all attachments, off-bearer, power unit. Priced very reasonably. Can be seen at our plant.

THE KENT MACHINE COMPANY
113 E. Portage Trail, Cuyahoga Falls, Ohio

POSITION WANTED

Young man experienced in the complete operations of concrete block producing. Capable mechanic. Cost minded.

Address: Box A-19, care CONCRETE
400 W. Madison St. Chicago 6, Ill.

WANTED

Position as superintendent for ready mixed concrete or concrete block plant, 14 years experience.

Address: Box A-20, care CONCRETE
400 W. Madison St. Chicago 6, Ill.

FOR SALE

Fork and platform power lift trucks, used and guaranteed factory rebuilt.

Erickson Power Lift Trucks, Inc.
St. Anthony Blvd. & University Ave., N. E.
MINNEAPOLIS 18, MINNESOTA
PHONE—STERLING 1-9508

FOR SALE

Used Gocorp "Senior" plain pallet block machine complete with motors. Price $2000.00. Reason for selling — installed new equipment.

CRONIN & ARCHER
Bel Air, Maryland Phone: Belair 581

WANTED

Man experienced in manufacture of cast stone. Write giving qualifications and experience. Must be able to take over shop. Salary open.

FLORENCE CONCRETE PRODUCTS, INC.
119 E. Maple St. Florence, S. C.

USED BLOCK MACHINES FOR SALE

Several Besser 3-block machines, variously equipped and in good condition. Priced from $5,000 to $13,000. Write or telephone:

BERGEN MACHINE & TOOL CO., INC.
Nutley 10, N. J. Nutley 2-5526

COLORS

For Cement and Concrete

COLOR YOUR CONCRETE WITH LANSCO CEMENT COLORS, available in 40 ATTRACTIVE shades. Suitable for all types of concrete products. Write for our new color card, copy of "Suggestions For Using Cement Colors," and for free samples and price list.

Manufactured by:

LANDERS-SEGAL COLOR CO.
76 Delavan St. • Brooklyn 31, N. Y.

For QUICK RESULTS . . .

put your problem in

CONCRETE'S Classified Ad Section

FOR SALE

Semi-Automatic Kent Blockmaker, vibrator type, 4" & 8" mold boxes, one pallet oiler, Barrett hand lift truck, 2480 pallets. Excellent condition. F. O. B. Medina. Priced for quick sale.

CITY BLOCK & SUPPLY CO.
300 State Rd. Medina, Ohio

SALESMEN WANTED

We have some good openings for sales representatives having a knowledge of block plant operation, offering immediate earnings with exceptionally strong future potential. Company entering upon aggressive sales promotion program on finest Lith-I-Block Machine ever made. Write in confidence, stating what territory interests you, with resume of experience and personal data, to:

The Lithibar Company
HOLLAND, MICHIGAN

FOR SALE

1—Model L-5 Lith-I-Bar, 3-block machine complete with motors. Attachments for making 6", 8", 12" block, halves, corners, sash, brick, etc. Pallet oiler, pallet return, air offbearing device and all necessary electrical controls, completely automatic.

2—20-HP Quincy air compressors & tank — Free standing.

1—B.V. aggregate crusher with electric motor. As we must wreck the existing building in which this machinery is housed to make way for a new warehouse, no reasonable offer will be refused.

RITTER CONCRETE BLOCK COMPANY
68th and Fairpark Ave.
Cincinnati, Ohio

WORLDS BEST
Stripping Splash
Block Molds 2½"x11½"x36"

F. H. A. Approved Mold Made out of deep drawn 16 gauge steel $16.00 each in lots of 10 or more $12.95 F.O.B.

Send for Free Bulletin on many other High Profit Low Cost Molds.

PARK MOLD & STEP CO.
1020 N. Raymond Rd. Battle Creek, Mich.

PLAIN PALLET CLEANING

We truck our machine to your plant and supervise entire cleaning and planing off of pallet residue. No need to shut down as we will keep up with production.

EDWARD A. LOBSTEIN

5363 Seminole Ave. Detroit 13, Mich.
Phone: Walnut 2-1133

INVENTORS AND MACHINE DESIGNERS

National manufacturer is desirous of obtaining manufacturing and sales rights on any equipment or improvements used in concrete products plants on a royalty or outright purchase basis. Patents not essential. Protection guaranteed.

Address: Box E-4, care CONCRETE
400 W. Madison St. Chicago 7, Ill.

FOR SALE

1-18 cu. ft. Stearns Mixer
1-18 cu. ft. Skip Hoist
Excellent condition — cheap.

NEWCOMB BROTHERS
Forty Fort, Pa. Phone: Butler 7-2135

SMITHKO COLORS CEMENT

- The Standard of Comparison for Nearly Forty Years
- 65 Shades to Choose From Including Many New Colors

Send For Latest COLOR CARD, Samples, Technical Brochure, and Quotations.

SMITH CHEMICAL & COLOR CO.
53-57 John St., Brooklyn 1, N.Y.

SALESMEN WANTED

Prominent block machinery manufacturer offers exceptional career opportunities to two top-flight salesmen — one in the Southwest, one in the Middle West. Experience selling machinery and equipment to block plants in these areas preferred, but related experience will be considered. Submit in confidence, complete resume of education, experience, earnings, personal data.

Address: Box A-18, care CONCRETE
400 W. Madison St., Chicago 6, Ill.

FOR SALE

One-5,000 lb. Erickson Power Lift Truck, with side shifter, stand up type, tilting mast. Excellent condition. For information contact:

THE MORIE-VIOLA COMPANY
South Spring Road Vineland, N. J.

Concrete Block Machine
Factory Reconditioned

FMC—180, plain pallet block machine, guaranteed. Comes complete with motors and mold box. Capacity 1400 blocks daily. $2750.00. Financing available.

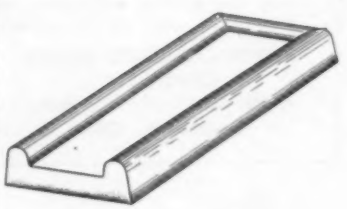
FLEMING MANUFACTURING CO.
Cuba, Missouri

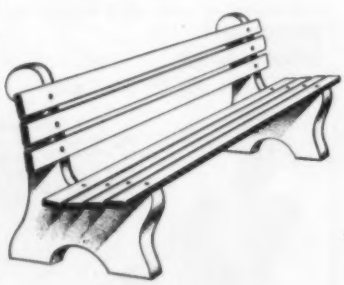
PALLET CLEANING

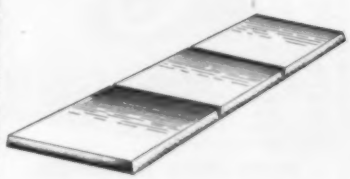
We have the most modern machines in use and can do your pallet cleaning to meet your work schedule. There is no extra charge for transporting our machines as they move on our own trucks.

EASTERN PALLET CLEANING, INC.
2424 95th Street North Bergen, New Jersey
Phone: Union 9-0260

Always Use
SPILLMAN'S CONCRETE FORMS!







featuring . . .

- SPLASH BLOCKS
- PARK BENCHES
- STEPPING STONES
- BIKE BLOX
- STEP TREADS
- CHIMNEY CAPS
- POOL COPING
- LAWN TRIM
- PICNIC TABLES

•

SWISS FORM OIL

•

VIBRO-TABLES

•

FOR DETAILS WRITE TO:
R. L. SPILLMAN CO.
Box 534, Station "G" Columbus, Ohio

E. L. CONWELL & CO.

Established 1894

ENGINEERS • CHEMISTS
INSPECTORS

Cement, Chemical and Physical Laboratories
Tests of Cement, Concrete, Sand, Steel, Cement Block, Cement Brick.
Chemical Analyses of All Commercial Products. Complete Technical Supervision of Central Mixed Concrete Plants.

2024 ARCH ST. • PHILADELPHIA, PA.

SWAP — SELL — BUY
BLOCK MACHINES

Stearns #7 & 9 Jolteretes (Joltcrete owners at this price buy one for spare parts.)	$ 500.00 each
Mold Boxes #7 & 9	150.00 each
Truckman Platform Lift 4000 lbs. capacity	495.00
1—Y-40 Truckman Fork-Lift 4000 lb. Capacity. 1956 Model	3500.00
2—Air Offbearers Stearns #7 & 9	250.00 each
2—Hand Lift Trucks	175.00 each
1—Lith-I-Bar 2 Block Machine complete with 1000 plain steel pallets 18" x 22"	$4900.00
100—Racks and cored steel pallets	10.00 each

100,000 pressed steel pallets in stock
(Send tracing or sample for quotation).

WRITE • WIRE • PHONE
Mr. McCaughey

Send in list of equipment you need. If we don't have it in stock, we usually know where we can find it at a bargain.

GENERAL ENGINES CO., INC.
Route 130 Thorofare, N. J.
Phone: Tilden 5-5400

ESTIMATING MADE EASY

★

Building Estimator's Reference Book

By Frank R. Walker

Postpaid $13.50

New Fourteenth Edition, revised and re-written, contains latest estimating and cost data on everything that goes into building construction, from foundation to the finishing coat of paint. It can be used in any locality, regardless of local prices or wage scales.

FREE—VEST POCKET ESTIMATOR

With Building Estimator's Reference Book—THE NEW VEST POCKET ESTIMATOR. Contains 220 pages of up-to-the-minute estimating and cost data in condensed tabular form.

ORDER YOUR COPY FROM

Concrete Publishing Corp.

Book Department
400 W. MADISON ST., CHICAGO 6, ILL.

Use
ECONOFLEX
Flexible **ARMORING**
POST TENSION CASING

Fabricated with fully interlocking four wall construction out of .012" strip, having excellent impact crush resistance.

Write for Bulletin U-100BX2

Quality... ALL METAL FLEXIBLE HOSE PRODUCTS

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No Matter What SHAPE...

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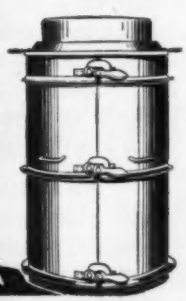
Set The STANDARD For Producing Quality Pipe!

Over 50 years of experience go into the production of every Quinn Concrete Pipe Form. That's why the Quinn Heavy Duty form is recognized as the STANDARD the world over for producing quality concrete pipe at the lowest cost. Used in making pipe by vibration, spading, or tamping. Sizes for pipe 10" to 120" and larger. Tongue and groove (as shown) or bell end pipe in any length desired. No matter what size, shape, or length pipe you need, there's a Quinn pipe form made to fit your requirements. Write today for our FREE catalog and estimates.



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AMERICA'S FINEST MOLDS AND LOWERING DEVICES

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YOUR AREA MAY STILL BE AVAILABLE
TERRITORY FRANCHISES

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THE EDITOR'S PAGE

DOUGLAS LEE

Consider the Future, Also

A good guess is that the sale of Shadowal, providing there is a little restraint used on the part of the producer, will grow into a very substantial market. And if it is merchandised properly, it rightfully should decorate the exterior and interior of many of the fine structures that are going to be erected in the next few years.

But there is a problem. And it should be brought out into the open here and now for discussion.

Of course, we realize every businessman likes to have each and every sale he can have today—it means money in his pocket here and now, not possible money that might come in tomorrow.

And so it is probable that some of the block producers with Shadowal attachments will accept every opportunity for an immediate sale, regardless of where and how the Shadowal is going to be used.

But we seriously question if this "grab today for tomorrow it may not be here" approach is wise.

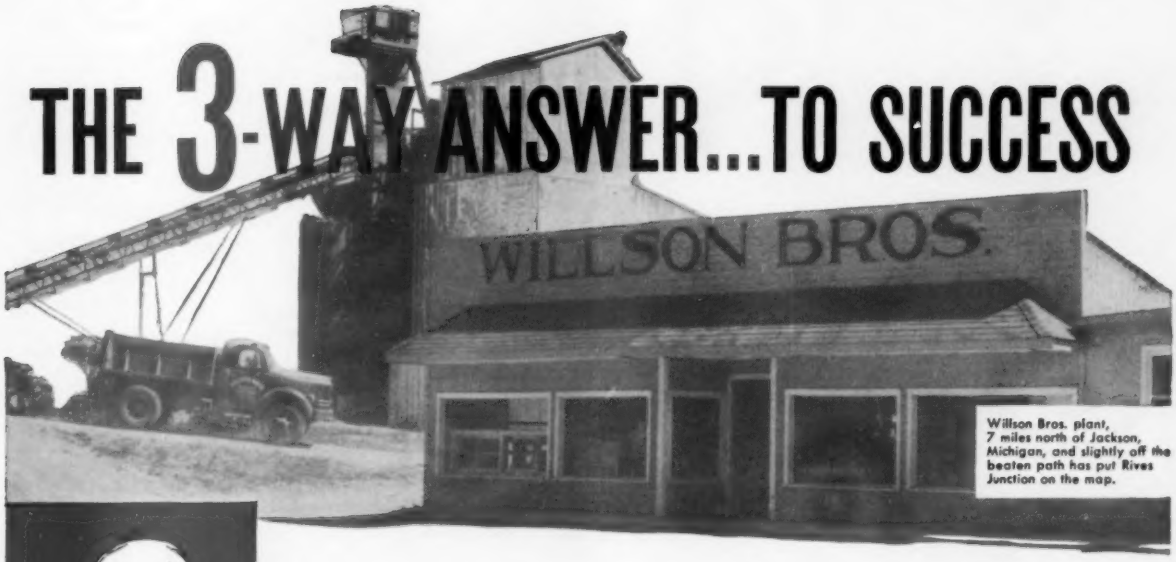
Let us point to another industry—the glass block industry—that came on the market some time back with a good looking building product. A part of this industry's problem is that their distributors and retail outlets jumped at every opportunity for an immediate sale. And the result, as you know, is that now glass block has a very limited market. It is trying to make a comeback, but it is finding it very hard.

We believe this same eventual drying-up of the market could take place with Shadowal. Heaven knows, many of you, along with us, would sincerely hate to see this happen. We have a fine and beautiful product. It should be remembered that the wise promotion and use of our premium products can upgrade the whole concrete masonry line.

So if we may, please let us ask that producers use a little restraint in their fervor to sell. Try to use some selection in the type of structure that will use Shadowal in your area. Try also to guide the architects and builders so that they don't all erect Shadowal structures using just a few of the many possible patterns.

Paraphrasing a person who is intimately associated with this unit with "one thousand" faces, we don't believe it would be good for the product to see a row of outhouses all faced with Shadowal.

THE 3-WAY ANSWER...TO SUCCESS



Willson Bros. plant, 7 miles north of Jackson, Michigan, and slightly off the beaten path has put Rives Junction on the map.

"The Stearns ELECTROMATIC says Bob Willson GIVES US...

WILLSON BROS.

July 26, 1957

Stearns Manufacturing Co., Inc.
Adrian, Michigan

Attention: Mr. Myron Hultmark, President

Dear Mr. Hultmark:

After about 4½ months of operating our new Electromatic, we thought you would like to hear from us in regards to production, operation and maintenance.

The machine is operating perfectly after making a few minor adjustments.

About two weeks ago I timed the boys on the machine and it was turning out 1080 blocks per hour.

The new Dual Vibrators sure make a very dense block.

Our sales since installing the new machine has increased 25% which is a good sign that the blocks are of excellent quality.

If at any time you or any of your staff would like to bring friends or customers to inspect our plant, we would be more than glad to have you come.

Yours very truly,
WILLSON BROS.
R. L. Willson
R. L. Willson

1. Perfect Machine Operation
2. 1,080 (8 x 8 x 16) Units Per Hour
3. Block of Excellent Quality

. . . These factors combined, have increased our sales 25%."

Why gamble? Check with *any* owner! For top production *and* quality . . . for *proven* durability and *dependability!* See the ELECTROMATIC . . . compare production — unit quality — and foremost, unit cost! Only by comparison, you will agree—you can produce better blocks . . . faster . . . for less, with the ELECTROMATIC.

The Stearns ELECTROMATIC installation at Willson Bros. plant.

Shown left to right; R. L. "Bob" Willson, President; A. C. "Art" Willson, Superintendent; Mabel Griswold, Bookkeeper.

ASK ANY OWNER!

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• Your goal is to make better concrete block . . . faster . . . at the lowest possible cost. The Besser Company, through its School for Blockmakers, is anxious to help you reach that goal. The School . . . the only one of its kind in the industry . . . was organized to train blockmakers and to help solve the many problems encountered in the operation of a block business. Competent instructors, carefully chosen for their training and experience, convey technical know-how to the students and give them a more practical, everyday plant operational outlook. There is no tuition fee. The courses are offered FREE to all qualified block plant personnel. Yes, even men from block plants not operating Vibrapac machines are welcome to attend the School. For complete enrollment data and additional information write:

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• Students in Materials and Methods Class, quartering, weighing, screening and analyzing aggregates.

• Mechanical Session — Checking proper adjustment of Besser Vibrapac.

○ Class in "Concrete Masonry and Its Proper Use" with instructor demonstrating the selection of the right block for its best use in the wall.

• J. H. Besser, President of Besser Company, presenting Certificate of Attendance to S. K. Narayana, Government of India, as Class President, Ivan Newport, Pre-Cast Concrete Products, Long Beach, California, looks on.

A7-139